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ABSTRACT

This instructor's manual and student learning guide for a secondary-level health occupations program cover four activities that deal with measurement of vital signs. The four activities concern temperature, pulse and respiration, blood pressure, and height and weight. For each activity, the instructor's manual provides this information: the course overview, a list of student goals, a list of instructional objectives, activity implementation (activity description, safety, required materials, preparation prior to class, instruction during class sessions, followup activities), an answer key to checkpoints for evaluations, and a list of the required duplication masters, copies of which are included. The student learning activity guide contains this material for each activity: introduction, a list of student goals, directions for completion of the activity, a list of required materials, and a programmed text for each of the instructional objectives. In the programmed text the steps involved in completing the instructional objectives are depicted in simple pictures with brief explanations of the procedures shown. Occupational descriptions are appended. (YLB)

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HEALTH OCCUPATIONS

KIT NO. 301 – VITAL SIGNS

INSTRUCTOR'S MANUAL

STUDENT LEARNING ACTIVITY GUIDE

State Department of Education
Office of Vocational Education
Prevocational Education
Columbia, South Carolina 29201

CE 034246

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HEALTH OCCUPATIONS

Kit No. 301 A – TEMPERATURE

INSTRUCTOR'S MANUAL

TITLE OF ACTIVITY

Kit No. 301 A, Health Occupations – Temperature

DURATION

Main Activity – 3 to 4 class periods
Follow-Up Activity – 1 to 3 class periods

GOALS

Each student will understand the proper technique to be used in handling an oral thermometer.

Each student will understand the process for cleaning and shaking down an oral thermometer.

Each student will learn how to read a clinical oral thermometer.

Each student will learn how to take an accurate oral temperature and record it on the Daily Log Sheet.

INSTRUCTIONAL OBJECTIVES

Each student will name the parts of an oral thermometer using a model wooden thermometer.

Using a model wooden thermometer, each student will indicate the proper method for holding an oral thermometer.

Using a model wooden thermometer, each student will locate the different temperature readings by using the numbers on the thermometer.

Using a glass oral clinical thermometer, each student will locate the different temperature readings by using the numbers on the thermometer.

Each student will shake down the mercury in a clinical thermometer to 95 or below.

Each student will clean a clinical thermometer.

Using an oral thermometer, each student will take another student's temperature.

Using the Daily Log Sheet, each student will record the information required in the proper columns.

VOCATIONAL CLUSTERS

Office Occupations

ACTIVITY IMPLEMENTATION

A. Activity Description

This activity will introduce the student to an aspect common to the health occupations field. After learning how to properly read and handle a model wooden thermometer, the student will have the opportunity to take and record the temperature of another student using a clinical oral thermometer.

B. Safety

Handle glass thermometers very carefully; they tend to break easily.

Glass thermometers can easily roll off desk tops and break.

Use a wet paper towel to pick up the glass from a broken thermometer.

Use a dry paper towel to pick up the mercury because it has a tendency to roll around. Do not handle the mercury; it is POISONOUS.

Wrap the two towels in another towel and place them in a paper or plastic bag and place in trash can.

C. Materials

1. Audio Visual Equipment
   Filmstrip projector
   Cassette player
   Filmstrip – "Temperature Pulse, Resperation" (Nursing Care Series)
2. Technical Equipment
   13 clinical thermometers
   13 thermometer holders
   13 wooden thermometers
3. Expendable Materials
   100 cotton balls
   1 pint 70% rubbing alcohol
   1 pint liquid detergent
   1 roll paper towels or 25 antiseptic towels
   50 disposable cups

D. Preparation Prior to Class

If you are not familiar with this activity, you should read through the Student Activity Guide to become acquainted with the tasks involved.

Place desks in pairs or arrange tables to group students in pairs.

Preview filmstrip "Temperature, Pulse, Respiration" (Nursing Care Series).

At each work station, have the following items for the students.

2 Student Activity Guides
4 disposable cups
In cup No. 1, place a few drops of liquid soap and add enough water to wet 4 cotton balls. Add the 4 cotton balls.
In cup No. 2, add enough water to wet 4 cotton balls. Add the 4 cotton balls.
In cup No. 3, place 4 dry cotton balls.
Cup No. 4 is for used cotton balls.
1 wooden thermometer
Paper towels

At the instructor's desk, have the following items available

Handout sheets
Clinical thermometers
Thermometer holders with alcohol in each one

Have someone ready to issue hall passes if the bathroom has to be used for washing hands.

E. During Class Session

Taking a temperature is an activity to introduce you to Health Occupations. One of the duties is to take a person's temperature or, if working in a veterinarian's office, to take an animal's temperature. This activity will teach you how to take a correct temperature and read a clinical thermometer.

On your desk are the Student Activity Guides and equipment you will need to start learning about temperature taking.

Follow the directions in the guide and when you need a check point sheet or the clinical thermometer and holders you can come to the instructor's desk.

The instructor should be available to help students and check the readings of the oral temperatures. If an activity cannot be completed in one period, you may want to stop with Objective V. You would not need cotton balls, etc., until next period.

When students reach Objective V, one student should watch while the other partner goes through Objectives V – VIII. Have the students reverse positions when they are finished.

The Daily Log Sheet distributed with this activity will be used in Kits 301 B, C, and D also. Remind students to have this log sheet available when needed.

F. Follow-Up Activities

1. Have each student complete a View Fact Sheet.
2. Using the View Fact Sheet, students should report on at least one of the following occupations.
   Animal Care Technician
   Child Day Care Center Worker
   Licensed Practical Nurse
   Medical Assistant
   Nurse Aide
   Orderly
   Paramedic
   Registered Nurse
3. Each student will report job requirements at a health institution located in the area where he/she lives.
4. Each student will report on what health services can be obtained in their area.
5. Each student will volunteer to work in school health room.
6. Conduct a school survey on how many people can read a clinical thermometer among teachers and/or students.
7. Look up ads in the newspaper pertaining to the health occupations field. These ads could be listed as nursing assistant, dental assistant, veterinarian assistant, child development aides, aides in day care center for mentally retarded children, First Aid aide, public health department aide, or UpJohn's homemaker aide.

8. Take a field trip to any of the following health care agencies located close by:
   Hospital
   Clinic
   Educational institution
   Industrial plant
   Doctor's office
   Dentist's office
   Public health department
   Nursing home

ANSWER KEY

Check Point No. I

A. Bulb
B. Mercury
C. Stem

Check Point No. II

B.

Check Point No. III

1. 96.2
2. 98.6
3. 100.8
4. 101.4
5. 104.6

Check Point No. IV

1. 96.2
2. 97.8
3. 99
4. 101.4
5. 102.6

Check Point No. VI

1. Cups
2. Water, soap, cotton balls
3. Water, cotton balls
4. Cotton balls
5. Friction

MASTERS FOR DUPLICATION

View Fact Sheet
Check Point No. I
Check Point No. II
Check Point No. III
Check Point No. IV
Check Point No. VI
Daily Log Sheet

VIEW FACT SHEET

NAME _____ CLASS _____ OCCUPATION _____

A. List the advantages (good points) of this occupation (job).

B. List the disadvantages (bad points) of this occupation (job).

C. List three things you should know to do this occupation (job).
1.
2.
3.

D. What type of education should you get to be prepared for this occupation (job)?

E. What courses must you take to go into this occupation (job)?

F. What do you think your future in this occupation (job) will be?

G. What wage can you expect in this occupation (job)?

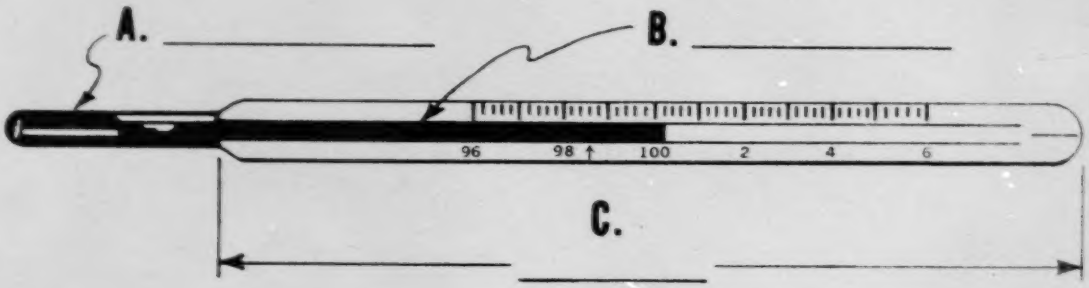
H. What are the working hours of this occupation (job)?

I. To learn more about this occupation (job), write to:

J. Using a scale of 1 to 5, circle the number that measures your interest in this occupation (job) as a possible career.

I don't like it. 1 2 3 4 5 I like it.

CHECK POINT NO. 1



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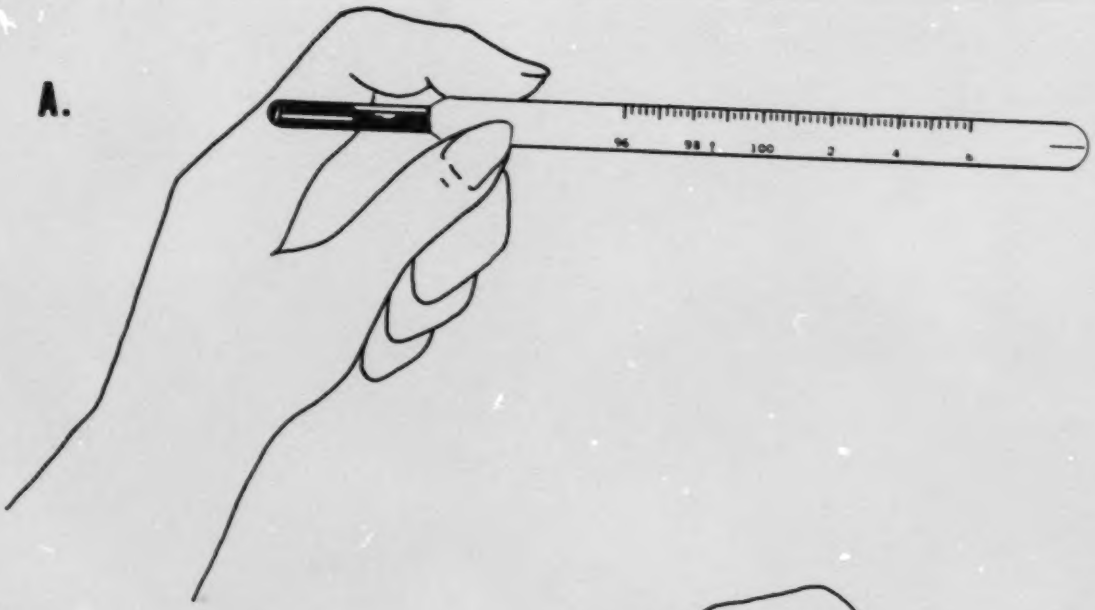
CHECK POINT NO. II

A.



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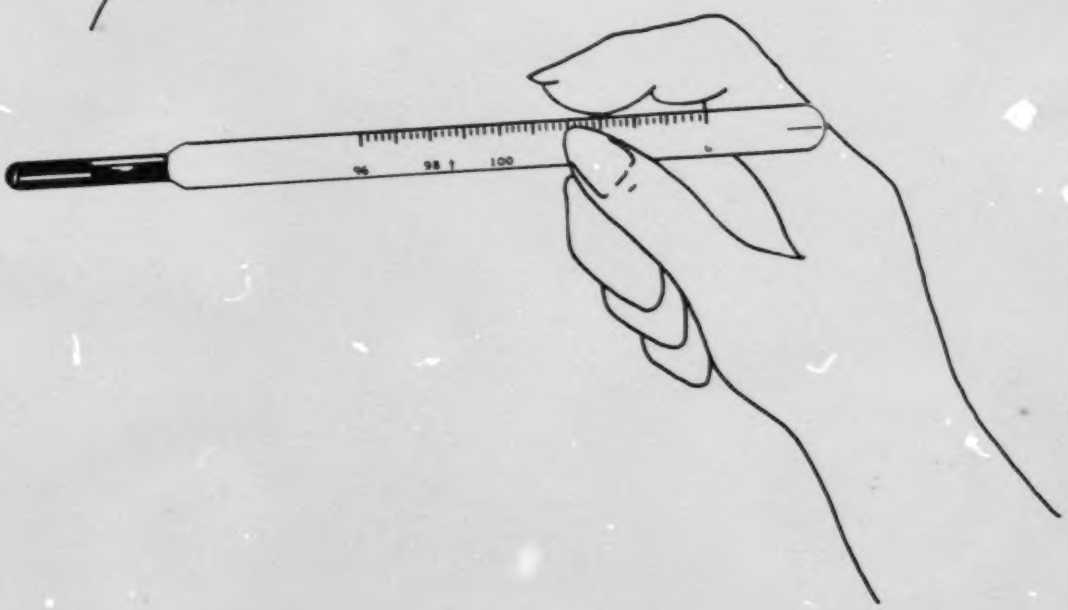

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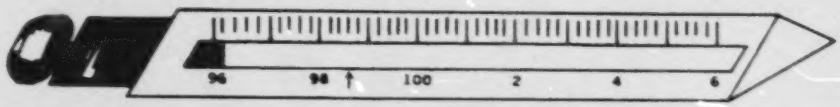
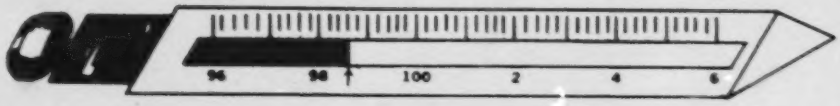
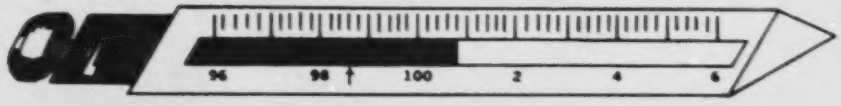
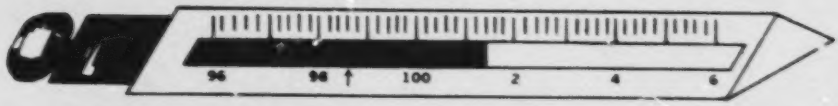
1. _____ 

2. _____ 

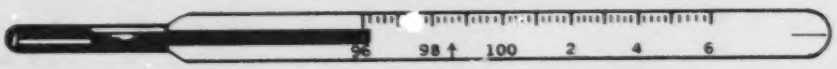
3. _____ 

4. _____ 

5. _____

11

CHECK POINT NO. IV

1. _____ 

2. _____

3. _____

4. _____

5. _____

CHECK POINT NO. VI

1. When cleaning a thermometer, you should get three _____.
2. In the first one, you should have _____, _____, and _____ _____.
3. In the second one, you should have _____, and _____ _____.
4. In the third one, you should have dry _____ _____.
5. When using the cotton balls on the thermometer, you should rotate the thermometer through the cotton ball from stem end to bulb end using a slight amount of _____.

DAILY LOG SHEET

Patient's Name	Temperature	Date	Time	Medical Assistant	Pulse	Respiration	Date	Time	Medical Assistant	Blood Pressure	Date	Time	Medical Assistant	Weight	Height	Date	Time	Medical Assistant	Checked

HEALTH OCCUPATIONS

Kit No. 301 B – PULSE AND RESPIRATION

INSTRUCTOR'S MANUAL

TITLE OF ACTIVITY

Kit 301 B, Health Occupations – Pulse and Respiration

DURATION

Main Activity – 1 to 2 class periods
Follow-Up Activity – 1 class period

GOALS

Each student will define and observe pulse and respiration.

Each student will locate the pulse areas.

Each student will accurately count and record pulse.

Each student will accurately count and record respiration on the Daily Log Sheet.

INSTRUCTIONAL OBJECTIVES

Each student will define pulse and respiration.

Each student will identify 6 pulse areas.

Each student will accurately time pulse for one minute and record the count on the Daily Log Sheet.

Each student will accurately count respiration for one minute and record the count on the Daily Log Sheet.

VOCATIONAL CLUSTERS

Office Occupations

ACTIVITY IMPLEMENTATION

A. Activity Description

Each student will learn the pulse areas. The student will successfully take and record the pulse and respiration rate of another student.

Each student will work individually on Objectives I and II. Each student will work with a partner on Objectives III and IV.

B. Materials

1. Audio Visual Equipment
   None
2. Technical Equipment
   5 Stopwatches or 5 clocks with second hand
3. Expendable Materials
   None

C. Preparation Prior to Class

Run off masters for duplication. If possible, laminate and file for future use.

Set up room so that students can work individually or in groups of two.

D. During Class Session

Taking pulse and respiration is a common task for the health assistant. These activities are usually done at the same time as temperature, blood pressure, height, and weight.

Each student will learn a definition for pulse and respiration. He/she will also take a student's pulse and respiration and record the count.

Have students read all information and follow the directions to complete check points.

Remind students to have the Daily Log Sheet obtained in Kit 301 A ready for use in this activity.

E. Follow-Up Activities

1. Take a field trip to a health institution.
2. Visit health room at school.
3. Attend a lecture and demonstration by the school nurse.
4. Look for ads in newspapers to see how many different places employ LPN's.

ANSWER KEY

Check Point No. 1

1. Respiration
2. Pulse

Check Point No. 2

On each side of body

1. Temples
2. Side of neck
3. Elbow
4. Wrist
5. Behind the knee
6. Foot

MASTERS FOR DUPLICATION

Check Point No. 1
Check Point No. 2

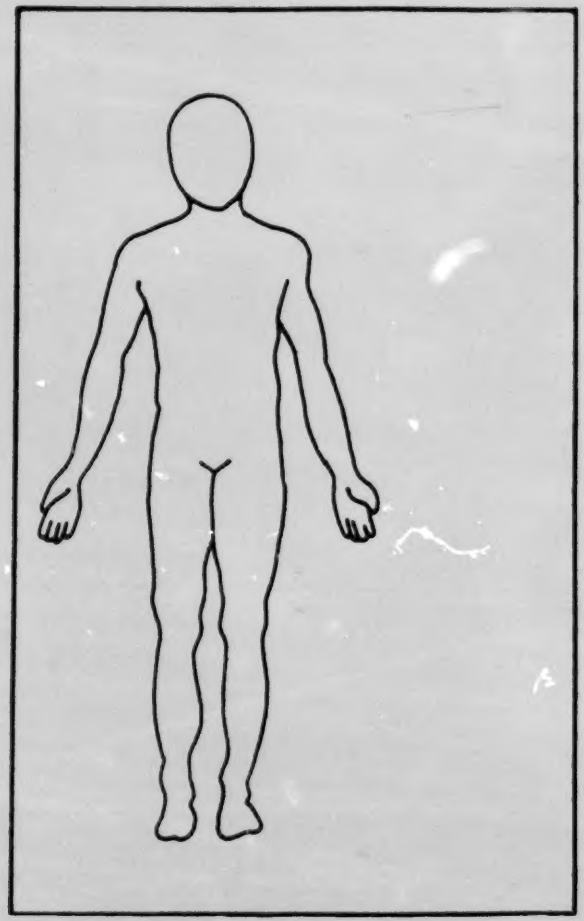
CHECK POINT NO. I

1. The main purpose of _____ is to supply the cells with oxygen and to rid the body of excess carbon dioxide.

2. _____ is the pressure of the blood felt against the wall of an artery as the heart alternately beats and rests.

CHECK POINT NO. II

Mark the pulse areas. Be sure to mark 6 pulse areas on each side.



HEALTH OCCUPATIONS

Kit No. 301 C – BLOOD PRESSURE

INSTRUCTOR'S MANUAL

TITLE OF ACTIVITY

Kit No. 301 C, Health Occupations – Blood Pressure

DURATION

Main Activity – 2 to 3 class periods
Follow-Up Activity – 1 to 4 class periods

GOALS

Each student will know the names of the different parts of a blood pressure cuff.

Each student will know the names of the different parts of a stethoscope.

Each student will learn how to use a blood pressure cuff.

Each student will learn how to take another student's blood pressure and record it on the Daily Log Sheet.

Each student will learn how to clean a stethoscope after use.

INSTRUCTIONAL OBJECTIVES

Each student will identify the parts of a sphygmomanometer (blood pressure cuff).

Each student will identify the parts of a stethoscope.

Each student will identify the markings on a blood pressure cuff gauge.

Each student will inflate a blood pressure cuff to approximately 140-150 and slowly let the air out until the needle indicates 0.

Each student will accurately take and record another student's blood pressure on the Daily Log Sheet.

Each student will clean the earpieces of the stethoscope with a piece of cotton soaked in 70% alcohol.

VOCATIONAL CLUSTERS

Office Occupations

ACTIVITY IMPLEMENTATION

A. Activity Description

Each student will learn about the parts of a stethoscope and a sphygmomanometer (blood pressure cuff) and the proper handling of these instruments. Once this has been accomplished, they will have a chance to take and record each other's blood pressure.

B. Safety

Handle the blood pressure cuff with care, as gauges can be broken.

Avoid pins or needles that could put holes in rubber tubing or bladder near the blood pressure cuff.

The thumbscrew will break if tightened too tight or loosened too much. It should not be turned either way beyond what you can control with the thumb and index finger.

Wash your hands before starting the procedure.

Clean the earpiece after each student's use.

C. Materials

1. Audio Visual Equipment
   Projection screen
   Filmstrip projector
   Cassette player
   2 filmstrips
   "The Licensed Practical Nurse"
   "Blood Pressure"
2. Technical Equipment
   13 aneroid sphygmomanometers (blood pressure cuffs)
   13 stethoscopes
   1 double stethoscope
3. Expendable Materials
   13 small paper cups
   60 cotton balls
   1 pint 70% alcohol (473 ml) 25 pencils

D. Preparation Prior To Class

Run off masters for duplication.

Obtain expendable materials.

Set up room so that students can work in groups of two.

At each station, have the following items for the students.

4 cotton balls in a cup of 70% alcohol
1 stethoscope
1 aneroid sphygmomanometer (blood pressure cuff)
2 Student Activity Guides

Set up equipment for filmstrip.

E. During Class Session

Show the filmstrip.

The taking of a person's blood pressure is a common task of a practical nurse.

Each student will learn about a stethoscope and a blood pressure cuff. Once he/she learned how to use these instruments, you will have a chance to take the blood pressure of one of your classmates.

Have students read all information and follow the directions to complete the check points.

Remind students to have the Daily Log Sheet obtained in Kit 301-A ready for use in this activity.

F. Follow-Up Activities

1. Take a field trip to a health institution.
2. Visit health room at school.
3. Set up blood pressure screening at school to take other students' blood pressure.
4. Look for advertisements in newspaper to see how many different places employ LPNs.
5. Do reports on what blood pressure is, or hypertension and hypotension.
6. Visit first aid station in an industrial plant.

ANSWER KEY

Check Point No. I
- A. Cuff
- B. Aneroid gauge
- C. Bulb
- D. Thumbscrew
- E. Area of rubber bladder
- F. Tube to gauge
- G. Tube to bulb

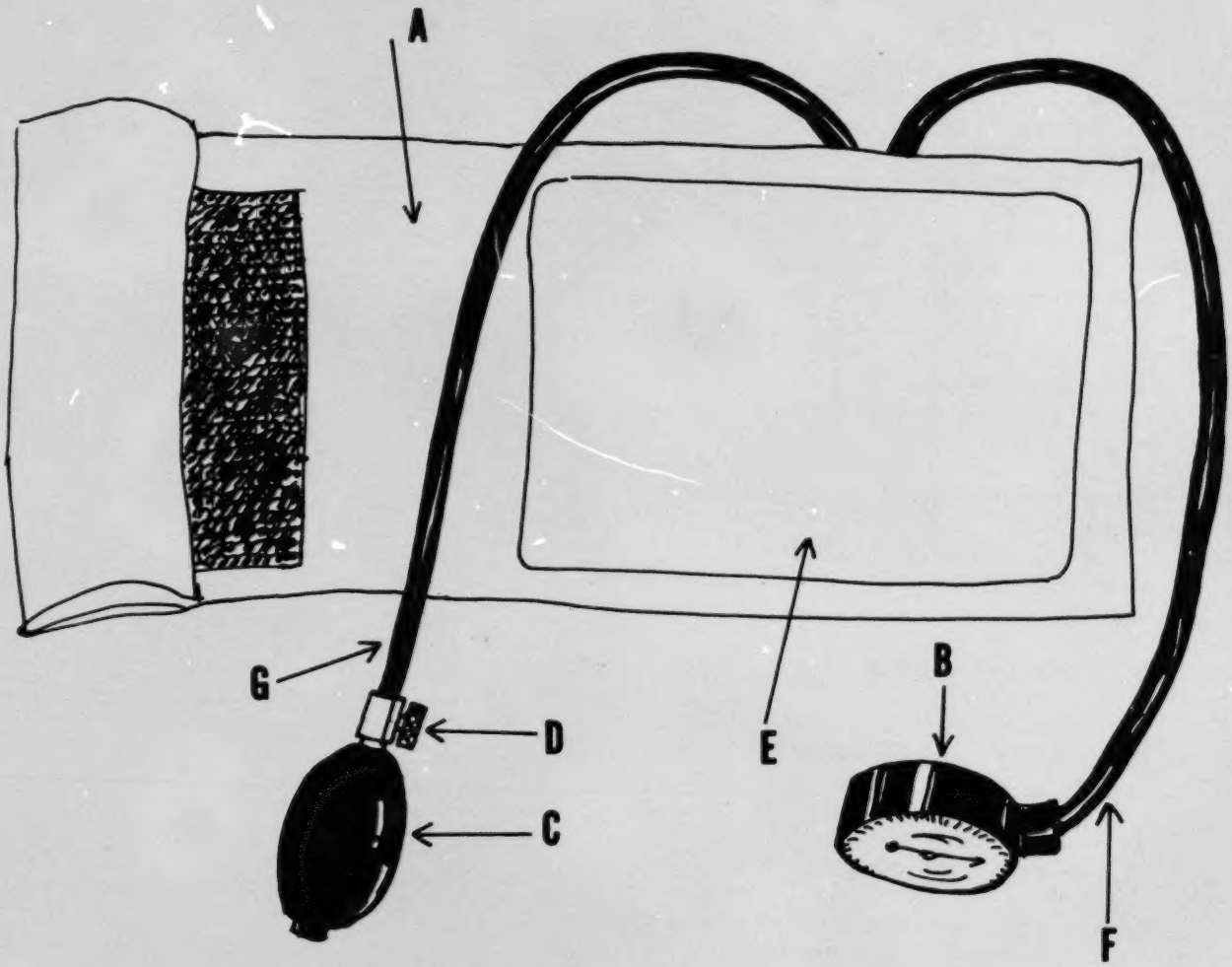
Check Point No. II
- A. Earpieces
- B. Tubing
- C. Head of stethoscope

Check Point No. III
- A. 82
- B. 130
- C. 58
- D. 108
- E. 134
- F. 172

MASTERS FOR DUPLICATION

Check Point No. I
Check Point No. II
Check Point No. III

CHECK POINT NO. 1



A _____

B _____

C _____

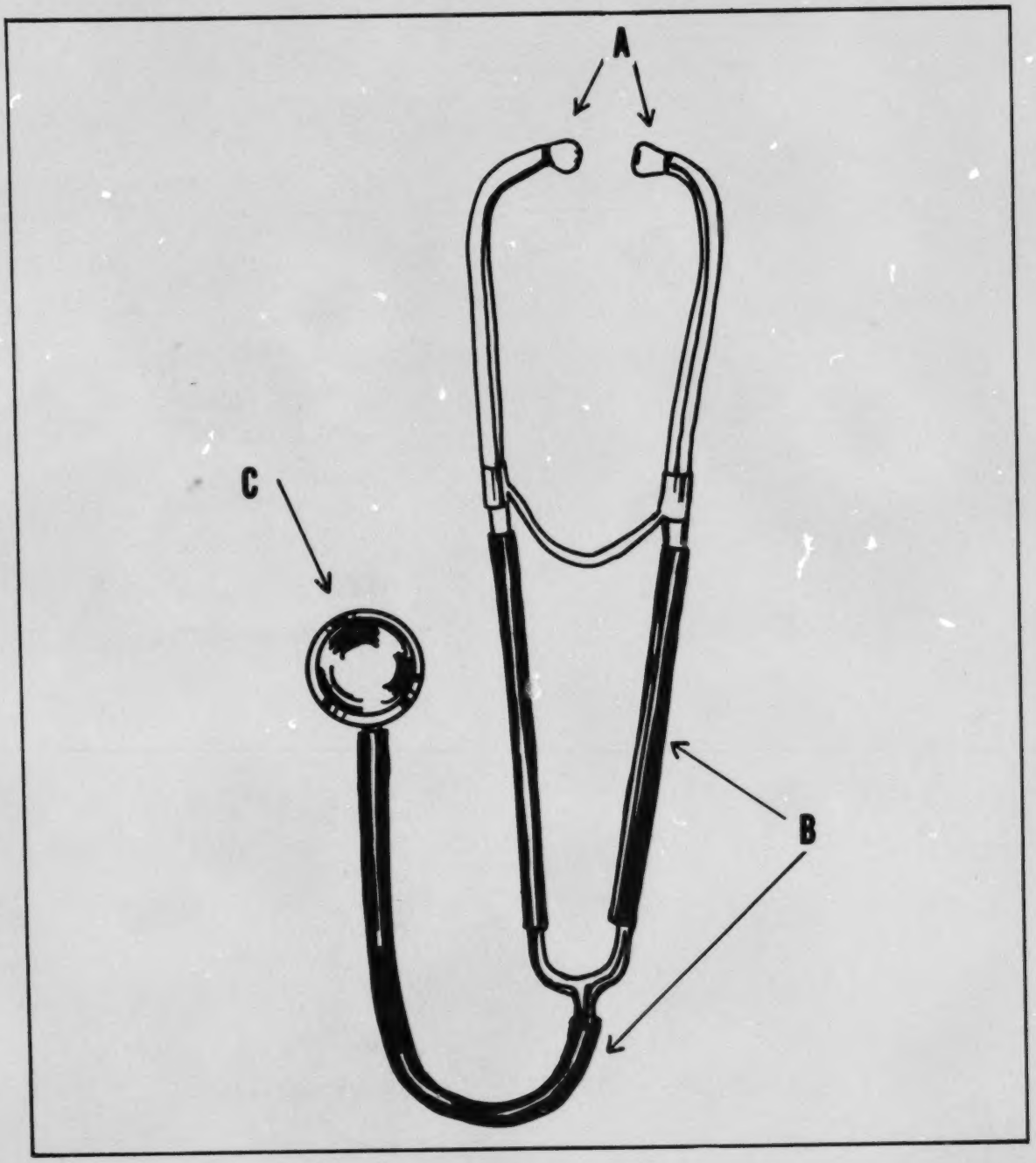
D _____

E _____

F _____

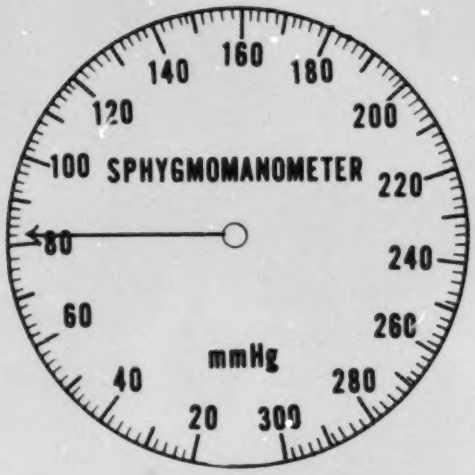
G _____

CHECK POINT NO. II



A _____ B _____ C _____

CHECK POINT NO. III



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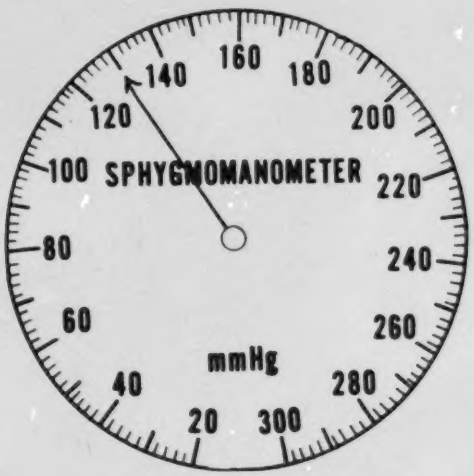

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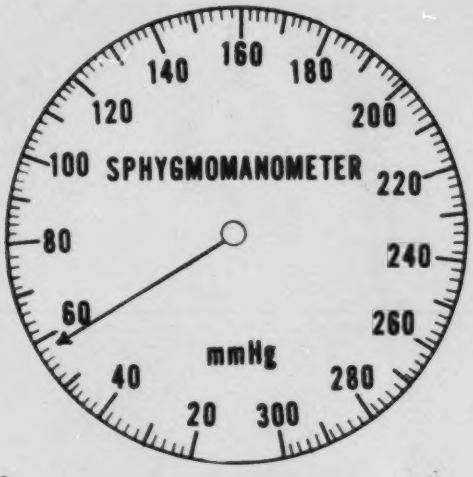

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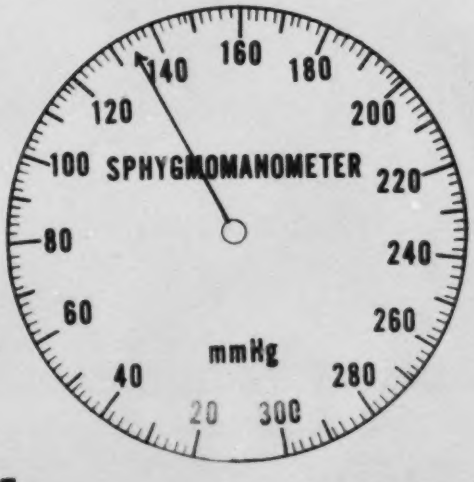
D _____



E _____

F _____

HEALTH OCCUPATIONS

Kit No. 301 D – HEIGHT AND WEIGHT

INSTRUCTOR'S MANUAL

TITLE OF ACTIVITY

Kit No. 301 D, Health Occupations – Height and Weight

DURATION

Main Activity – 1 to 2 class periods
Follow-Up Activity – 1 class period

GOALS

Each student will identify the parts of a physician's scale.

Each student will accurately convert inches to feet.

Each student will accurately weight a patient (another student) and record it on the Daily Log Sheet.

The student will accurately measure the height of another student and record it on the Daily Log Sheet.

INSTRUCTIONAL OBJECTIVES

Each student will identify the parts of a physician's scale.

Each student will convert inches to feet and inches with 90% accuracy.

Each student will weigh another student and record it on the Daily Log Sheet.

VOCATIONAL CLUSTERS

Office Occupations

ACTIVITY IMPLEMENTATION

A. Activity Description

The student will learn the parts of a physician's scale. After this has been accomplished, each student will take and record the height and weight of another student. Each student will work individually on Objectives I and II. A partner will be needed to complete Objective III.

B. Materials

1. Audio Visual Equipment
   None
2. Technical Equipment
   3 physician's scales with heighth measure
3. Expendable Materials
   None

C. Preparation Prior To Class

Run off masters for duplication. If possible, laminate and file them for future use.

Set up the classroom so that students can work individually or in groups of two.

D. During Class Session

Taking a patient's height and weight is a common task for a practical nurse. This activity is usually preformed at the same time that temperature, blood pressure, pulse and respiration are taken and recorded.

Each student will learn the parts of a physician's scale. He/she will also accurately take the height and weight of a student and record the information.

Have students read all information and follow the directions to complete check points.

Remind students to have the Daily Log Sheet obtained in Kit 301 A ready for use in this activity.

E. Follow-Up Activities

1. Take a field trip to health institution.
2. Visit health room at school.
3. Attend a lecture and demonstrations by the school nurse.
4. Look for ads in newspapers to see how many different places employ LPN's.

ANSWER KEY

Check Point No. I

A. Small weight indicator
B. Balance bar
C. Large weight indicator
D. Measuring rod
E. Clamp
F. Platform

Check Point No. II

		Feet	Inches
1.	63 1/2"	5'	3 1/2"
2.	60"	5'	0"
3.	72 3/4"	6'	3/4"
4.	54 1/4"	4'	5 1/4"
5.	48"	4'	0"
6.	55 3/4"	4'	7 3/4"
7.	75 1/4"	6'	3 1/4"
8.	50"	4'	2"
9.	65 1/2"	5'	5 1/2"
10	38 1/2"	3'	2 1/2"

MASTERS FOR DUPLICATION

Check Point No. I
Check Point No. II

CHECK POINT NO. I

Identify the parts of a physician's scale.

A. _____

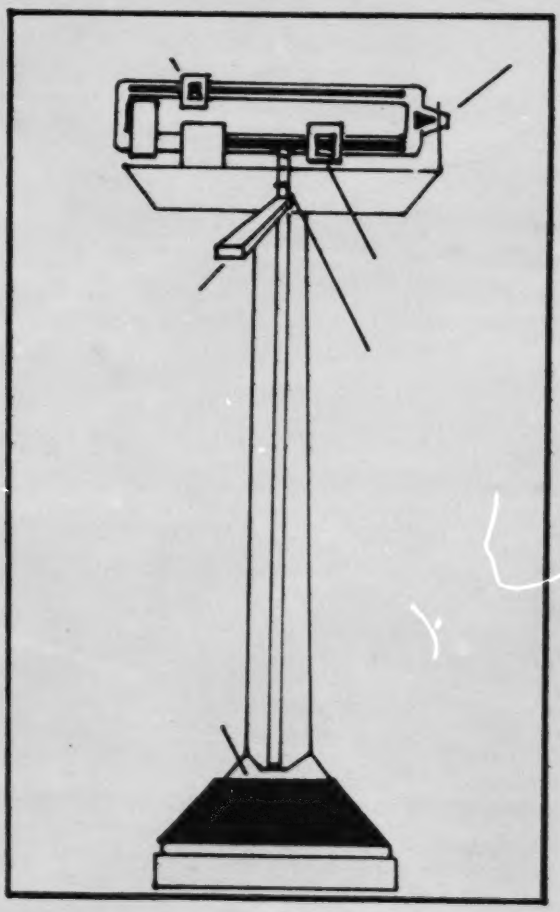
B. _____

C. _____

D. _____

E. _____

F. _____



CHECK POINT NO. II

Convert the following heights to feet and inches.

		Feet	Inches
1.	63 1/2"	____	____
2.	60"	____	____
3.	72 3/4"	____	____
4.	53 1/4"	____	____
5.	48"	____	____
6.	55 3/4"	____	____
7.	75 1/4"	____	____
8.	50"	____	____
9.	65 1/2"	____	____
10.	38 1/2"	____	____

HEALTH OCCUPATIONS

Kit No. 301 A – TEMPERATURE

STUDENT LEARNING ACTIVITY GUIDE

INTRODUCTION

Throughout the health occupations field, taking a person's temperature is a common occurrence. Even though it is done often, it is a task which is very important and must be done accurately.

You probably have had your temperature taken by your mother, a nurse, or a doctor. What they were trying to find out was whether your body temperature was higher than normal. If your temperature is high and you haven't been doing a lot of exercise, it is a sign that your body is fighting an infection.

In this activity, you will learn how to take a temperature. Learning this procedure will give you some idea of one of the tasks performed by someone in the health occupations field — it may also come in handy in other situations.

GOALS

Each student will understand the proper technique to be used in handling an oral thermometer.

Each student will understand the process for cleaning and shaking down an oral thermometer.

Each student will learn how to read a clinical oral thermometer.

Each student will learn how to take another student's oral temperature.

Each student will record the temperature on the Daily Log Sheet.

DIRECTIONS

Follow directions and complete each check point. Work in pairs on Objectives I through IV.

The Daily Log Sheet you use in this activity must be kept for use in Kits 301 B, C, and D.

MATERIALS

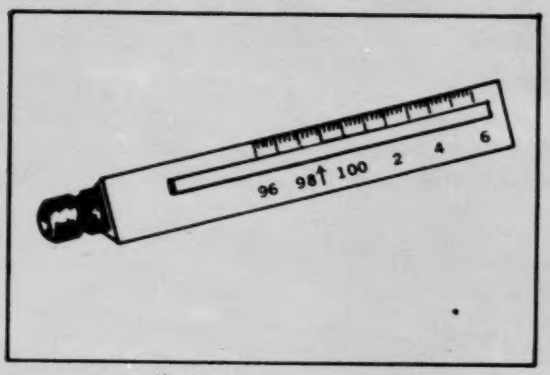
At your work station, you should have the following items:

2 Student Activity Guides
4 disposable cups
Cup No. 1 should have soapy water with 4 cotton balls in it.
Cup No. 2 should have plain water with 4 cotton balls in it.
Cup No. 3 should have 4 dry cotton balls in it.
Cup No. 4 is for used cotton balls
1 wooden thermometer
Paper towels

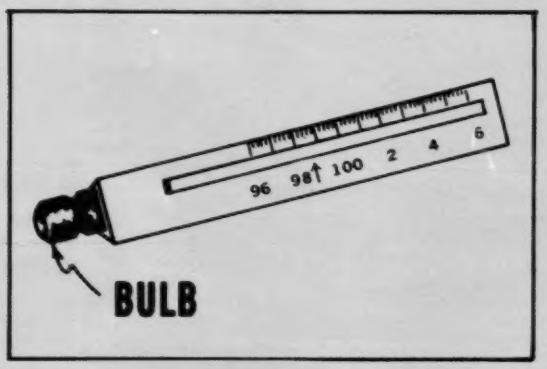
PROGRAMMED TEXT

Instructional Objective I

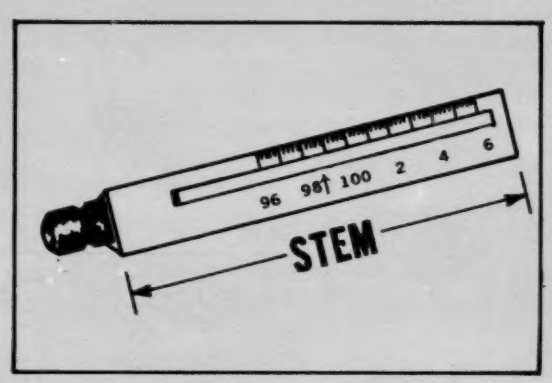
Each student will identify the parts of an oral thermometer using a model wooden thermometer.



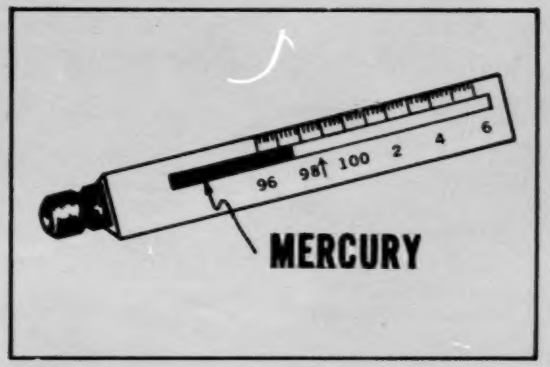
STEP 1 – Place the wooden thermometer in front of you in the same position as shown in the picture.



STEP 2 – The wooden knob on the left of the model thermometer represents the bulb on a clinical thermometer.



STEP 3 – The stem is the length of the thermometer up to the bulb.



STEP 4 – The mercury of a clinical thermometer is represented by the silver strip of wood in the model thermometer.

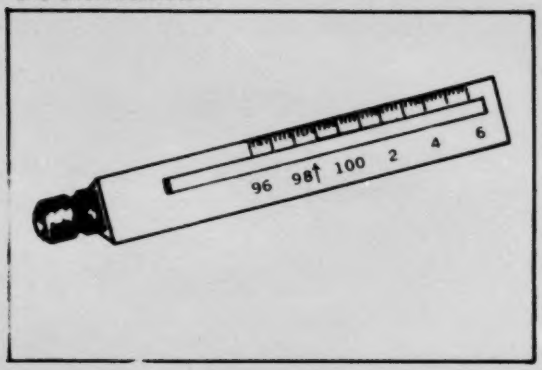
Check Point

Obtain a copy of Check Point No. I from your instructor. Without looking at your guide, identify the parts of the thermometer. Check your answers with your instructor.

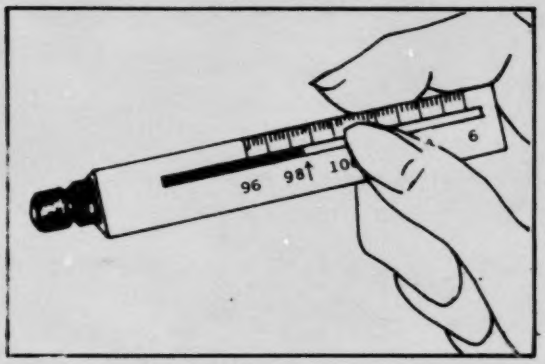
If your answers are wrong, go back to Objective I, study the definitions and repeat the check point. If your answers are correct, continue with Objective II.

Instructional Objective II

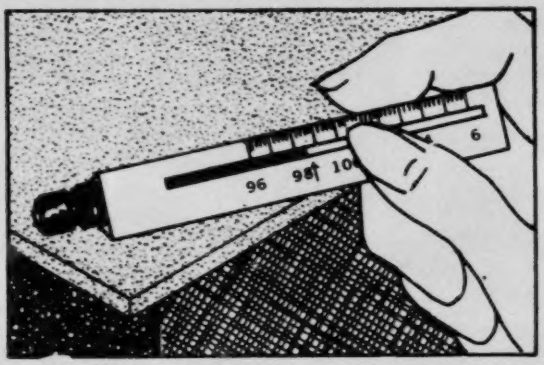
Using a model wooden thermometer, each student will locate the different temperature readings by using the numbers on the thermometer.



STEP 1 – Place the wooden thermometer in front of you in the same position as shown in the picture.



STEP 2 – Using your thumb and index finger, grasp the stem of the thermometer at the end opposite the bulb.



STEP 3 – Lift the thermometer off the table. This is the correct method for holding the thermometer.

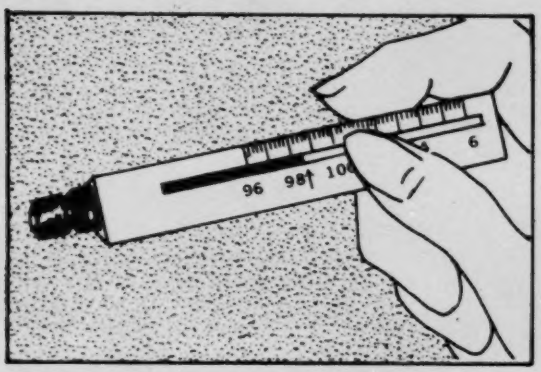
Check Point

Obtain a copy of Check Point No. II from your instructor. Without looking at your guide, circle either A or B as the correct way to hold a thermometer. Check your answer with your instructor.

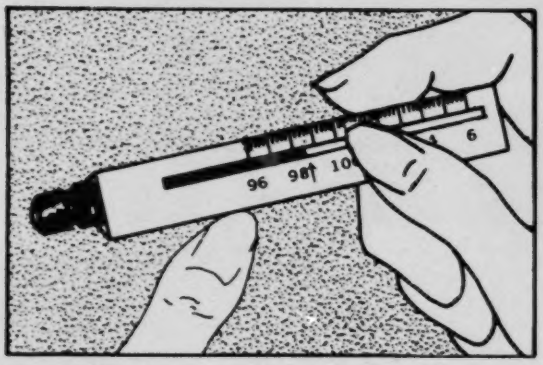
If your answer is wrong, go back to Objective II, study the steps and repeat the check point. If your answer is correct, continue with Objective III.

Instructional Objective III

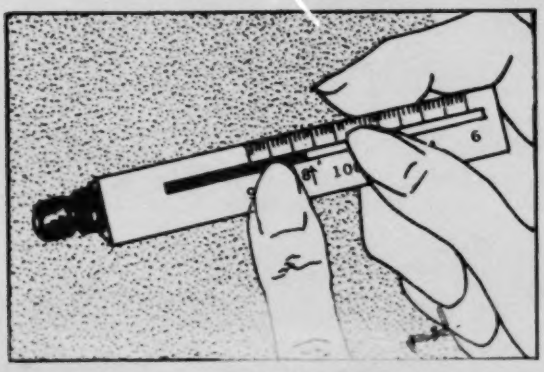
Using a model wooden thermometer, the student will locate the different temperature readings by using the numbers on the thermometer.



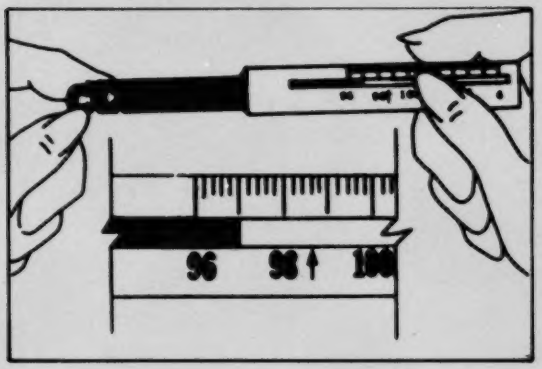
STEP 1 – Pick up the wooden thermometer.



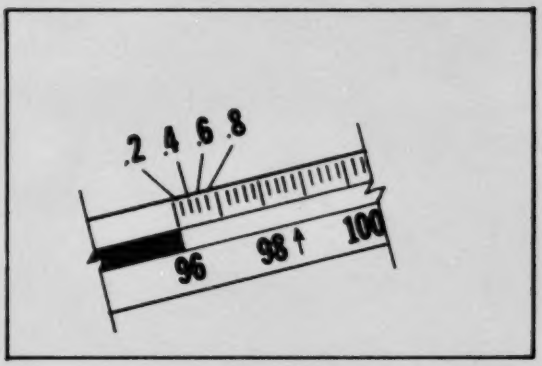
STEP 2 – Read the numbers on the thermometer starting at the bulb end.



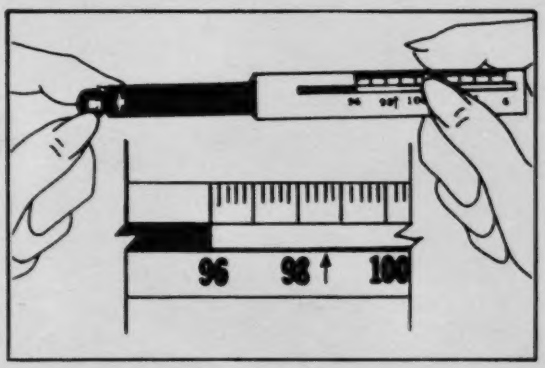
STEP 3 – Now look at the length of the unnumbered lines.



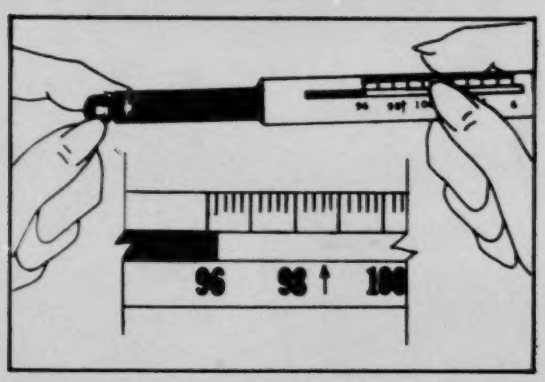
STEP 4 – Pull on the wooden knob until the edge of the silver lines up with the first long, unnumbered line after 96. This is 97 and all long, unnumbered lines are odd numbers.



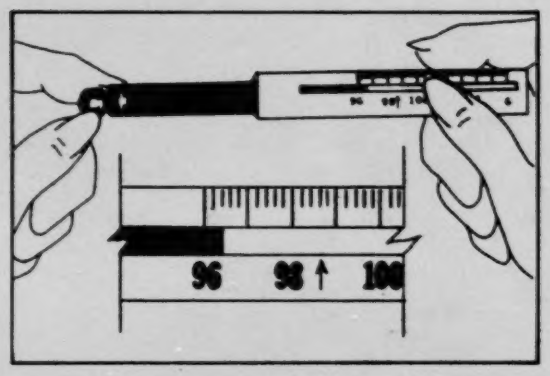
STEP 5 – Look at the short lines between the long lines. These are even tenths – .2, .4, .6, and .8.



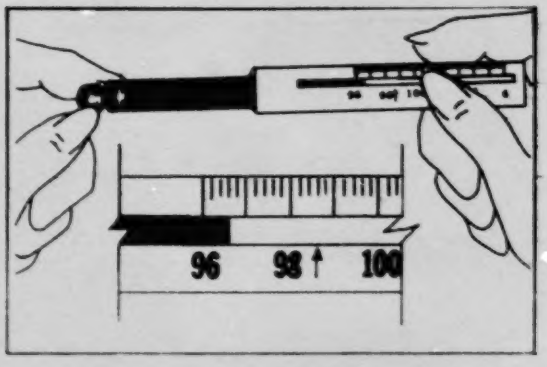
STEP 6 – Pull on the wooden knob until the edge of the silver lines up on 96.



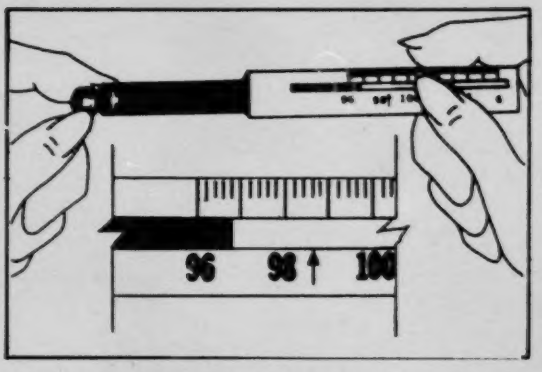
STEP 7 – Now, move the edge of the silver to the first short line after 96. This is 96.2.



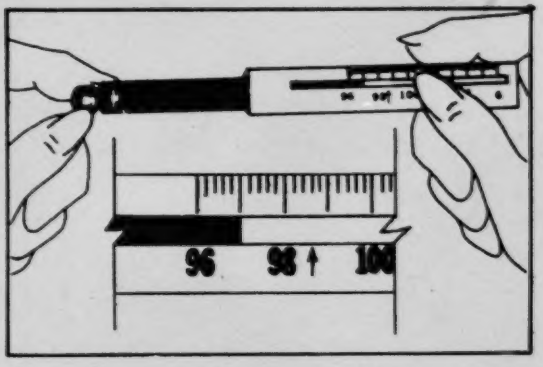
STEP 8 – Next, move the edge of the silver to the second short line after 96. This is 96.4.



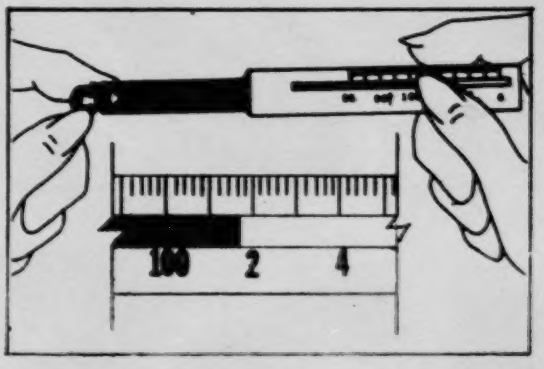
STEP 9 – Again move the edge of the silver to the third short line after 96. This is 96.6.



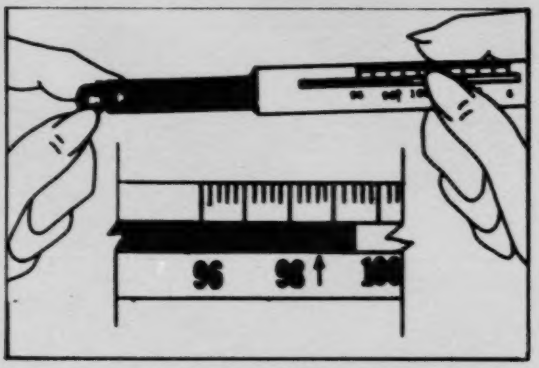
STEP 10 – Move the edge of the silver to the fourth short line after 96. This is 96.8.



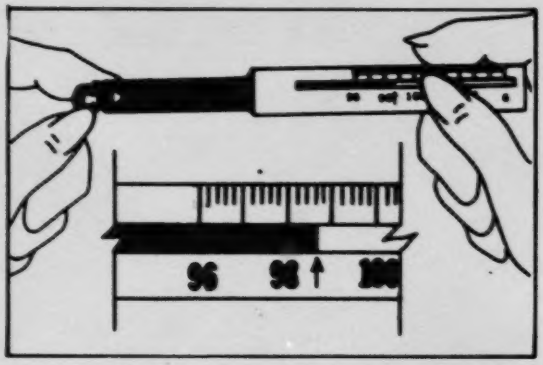
STEP 11 – Finally, move the edge of the silver to the first long line after 96. This is 97 which is a whole number.



STEP 12 – Move the edge of the silver to 101.6. Now move it to the first long line after 100. This is 101. Then move the edge of the silver to the third short line after 101. This is 101.6.



STEP 13 – Move the edge of the silver to 99.4. This will be the second short line following the long line after 98.



STEP 14 – Move the edge of the silver to 98.6. This will be the third short line following 98. It sometimes may have an arrow(↑) pointing to it because this is the average normal oral temperature.

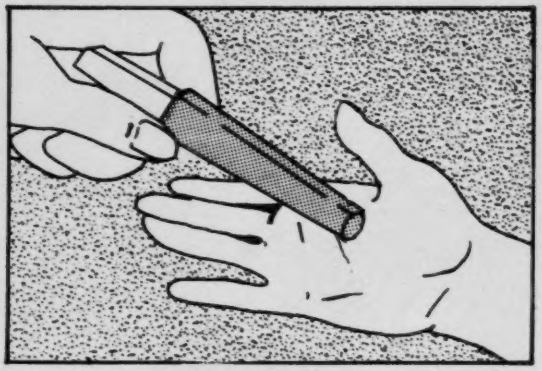
Check Point

Obtain a copy of Check Point No. III from your instructor. Without looking at your guide, write the temperature readings in the blanks. Check your answers with your instructor.

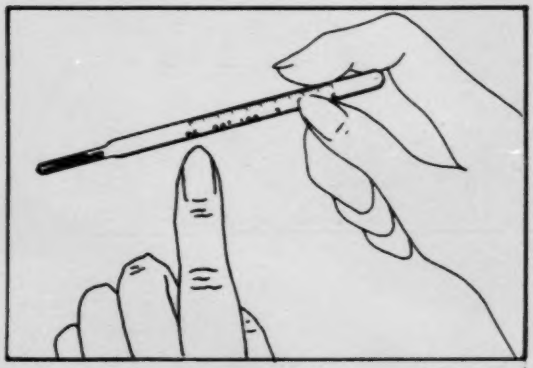
If your answers are wrong, go back to Objective III, study the steps and repeat the check point. If your answers are correct, continue with Objective IV.

Instructional Objective IV

Using a glass oral clinical thermometer, the student will locate the different temperature readings by using the numbers on the thermometer.

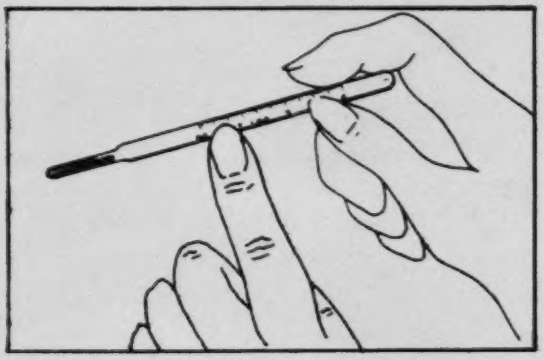


STEP 1 – Go to your instructor and ask for a glass oral thermometer that is in a container with 70% rubbing alcohol. Handle it carefully.

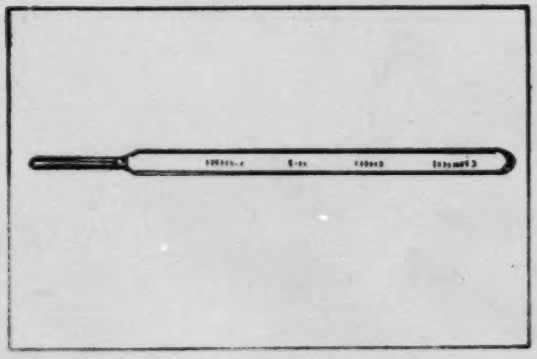


STEP 2 – Hold the thermometer by the stem end and look at the bulb end. Read the numbers on the thermometer – 96, 98, 100, 102, 104, and 106. Notice that they are even numbers.

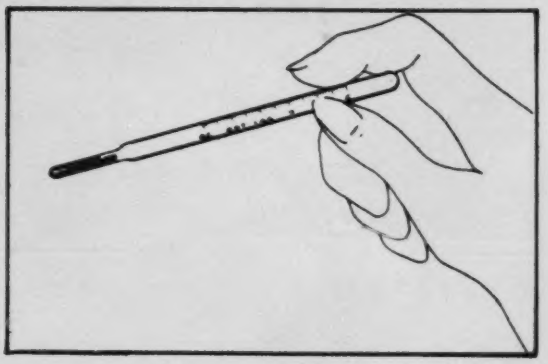
STEP 3 – Continue to hold the thermometer by the stem end and look at the long unnumbered lines. They represent the missing odd numbers – 97, 99, 101, 103, and 105.



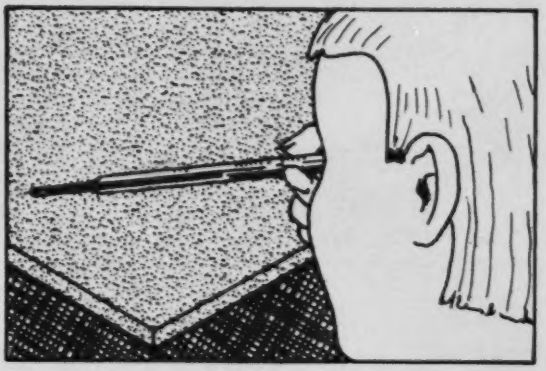
STEP 4 – Continue to hold the thermometer by the stem end and look at the short lines between each long line. Remember these are even tenths numbers – .2, .4, .6, .8, etc.



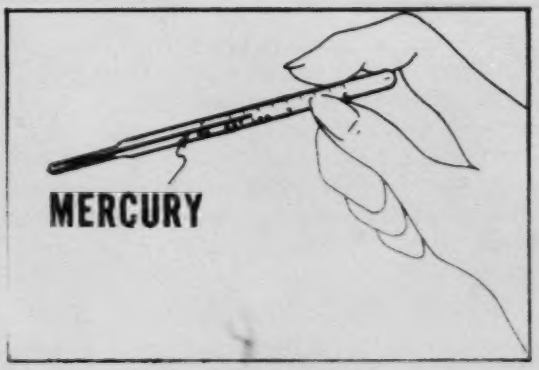
STEP 5 – Slightly rotate the thermometer away from you until you see a broad, white strip going from one end to the other. This is the back of the thermometer.



STEP 6 – Again rotate the thermometer until you see the lines along the top and the numbers at the bottom.



STEP 7 – Hold the thermometer at eye level and look between the lines and numbers. You should see a silver streak that starts at the bulb and ends at some point on the thermometer.



STEP 8 – The point at which the mercury ends is the temperature. By turning the thermometer slightly, you can see what number the end of the mercury is closest to.

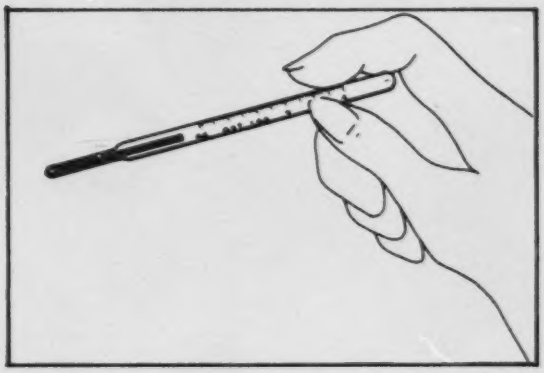
Check Point

Obtain a copy of Check Point No. IV from your instructor. Without looking at your guide, write the temperature readings in the blanks. Check your answers with your instructor.

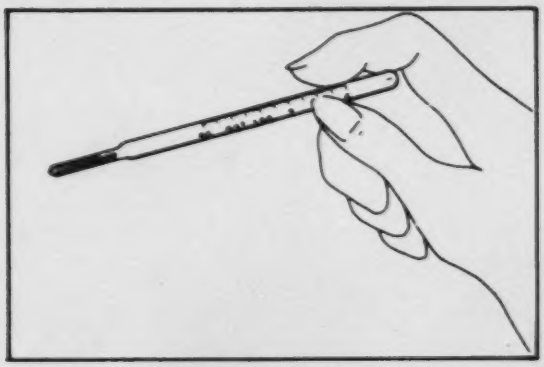
If your answers are wrong, go back to Objective IV, study the steps and repeat the Check Point. If your answers are correct, continue with Objective V.

Instructional Objective V

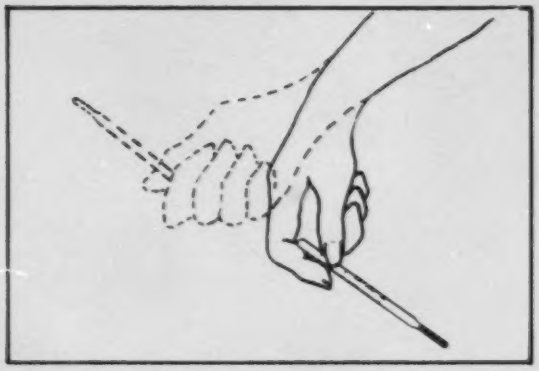
The student will shake down the mercury in a clinical thermometer to 95 or below.



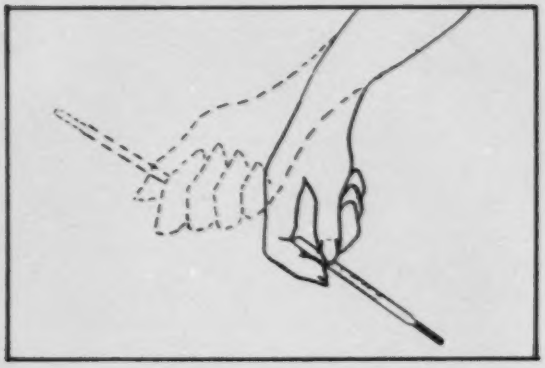
STEP 1 – The mercury in a clinical thermometer should read 95 or below before taking someone's temperature.



STEP 2 – Hold the thermometer by the stem end firmly between the thumb and the index finger.



STEP 3 – With a flick of the wrist and with a quick short jerking movement of the wrist, the mercury in the clinical thermometer should come down at least 1 degree. NOTE: *Be sure not to stand or sit near anything that could break the thermometer while you are shaking it down.*



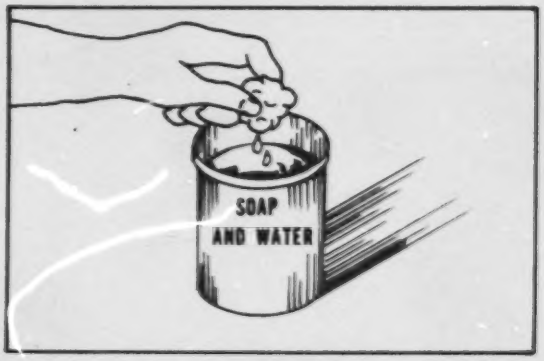
STEP 4 – Repeat this movement until the mercury is at 95° or below.

Check Point

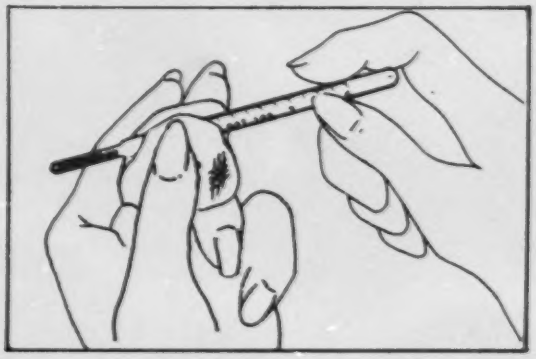
Have your instructor check the thermometer to see if it is below 95°.

Instructional Objective VI

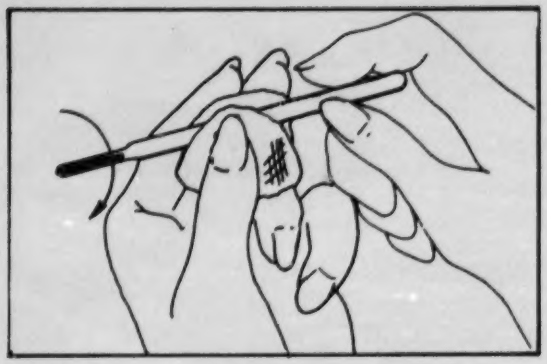
The student will clean a clinical thermometer.



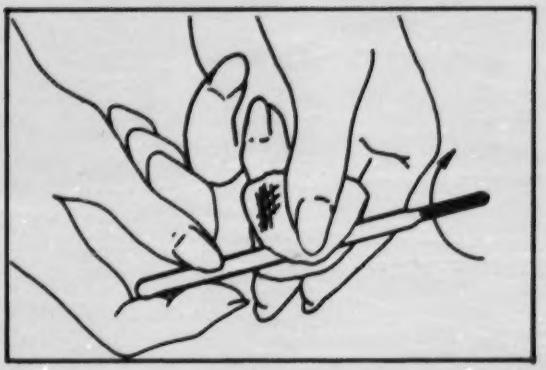
STEP 1 – Take a cotton ball soaked in the water and soap solution and squeeze out the excess liquid.



STEP 2 – In one hand, hold the thermometer by the stem end. Hold the cotton around the thermometer with the other hand.



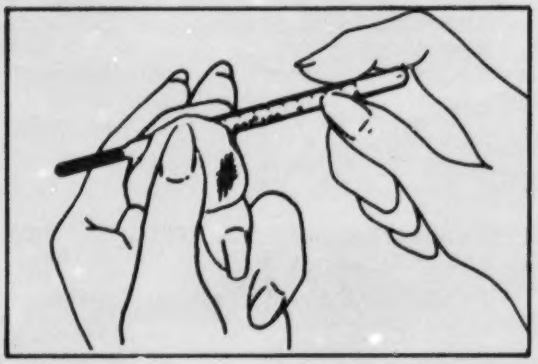
STEP 3 – Rotate the thermometer inside the cotton ball as you move the cotton ball from stem end to bulb end. Use a small amount of friction to clean the thermometer.



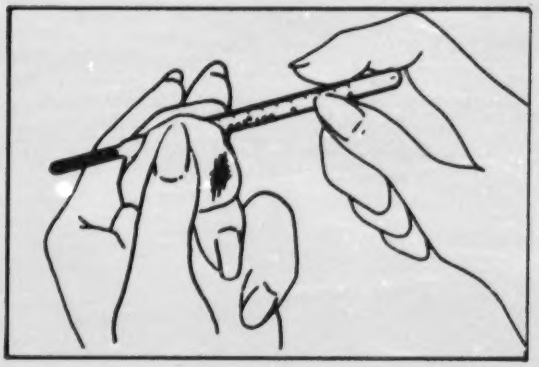
STEP 6 – Rotate the thermometer inside the cotton ball as you move the cotton ball from stem end to bulb end. Use a small amount of friction to clean the thermometer.

STEP 4 – Take a cotton ball soaked in water and squeeze out the excess water.

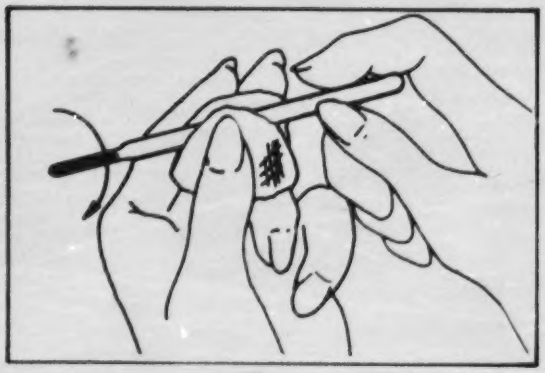
STEP 7 – Take a dry cotton ball.



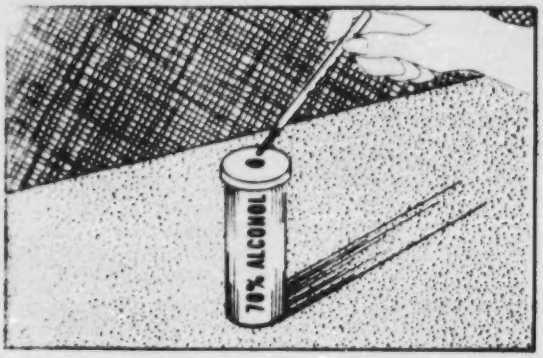
STEP 5 – In one hand hold the thermometer by the stem end. Hold cotton around the thermometer with the other hand.



STEP 8 – In one hand, hold the thermometer by the stem end. Hold cotton around the thermometer with the other hand.



STEP 9 – Rotate the thermometer inside the cotton ball as you move the cotton ball from stem end to bulb end. Use a small amount of friction to clean the thermometer.



STEP 10 – Place the clean thermometer in the holder containing the 70% solution of alcohol for at least five (5) minutes.

Check Point

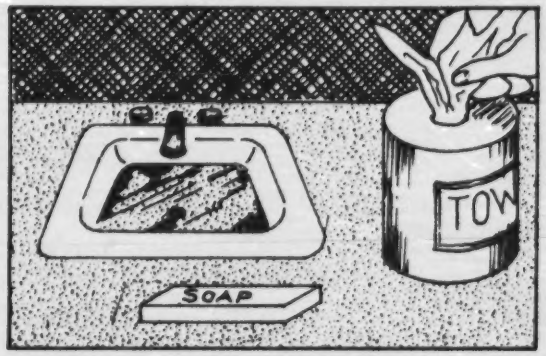
Obtain a copy of Check Point No. VI from your instructor. Without looking at your guide, complete each statement with the correct word/words. Check your answers with your instructor.

If your answers are wrong, go back to Objective VI, study the steps and repeat the check point. If your answers are correct, continue with Objective VII.

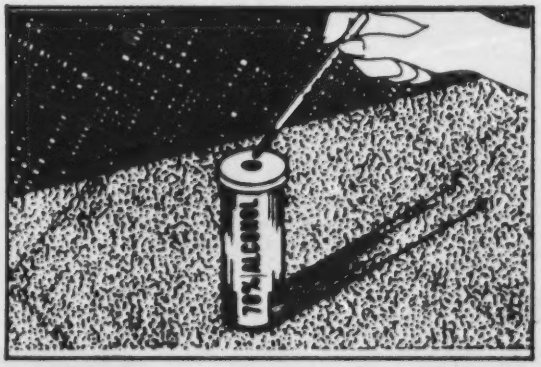
Instructional Objective VII

Using an oral thermometer, the student will take another student's temperature.

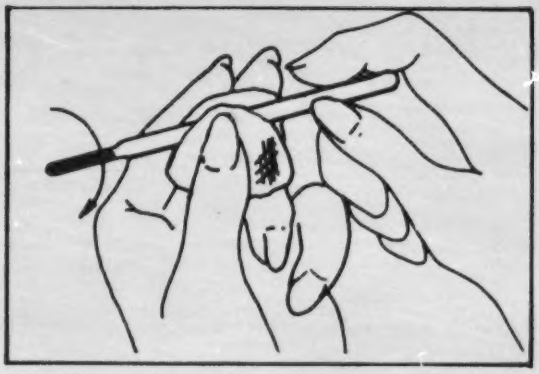
STEP 1 – Have the student whose temperature you are going to take sit in a chair.



STEP 2 – Wash your hands and wrists in warm, soapy water, rinse and dry well. If no water is available, use an antiseptic towel.

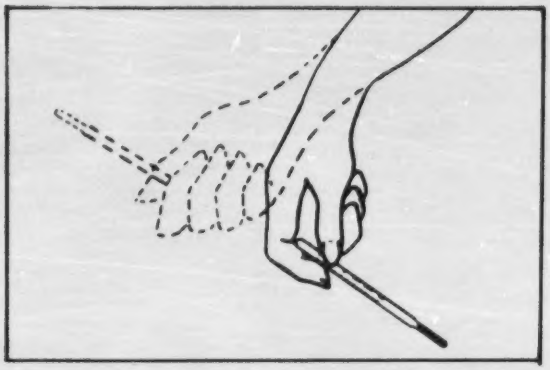


STEP 3 – Take thermometer out of the holder containing alcohol.



STEP 4 – Hold thermometer by stem end. With other hand hold dry cotton ball. Rotate the cotton ball around thermometer from stem to bulb using a small amount of friction.

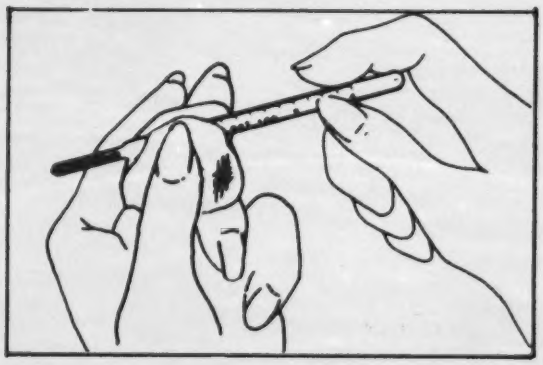
STEP 7 – Have the student close his/her mouth without biting the thermometer. Leave the thermometer in place for at least 3 minutes.



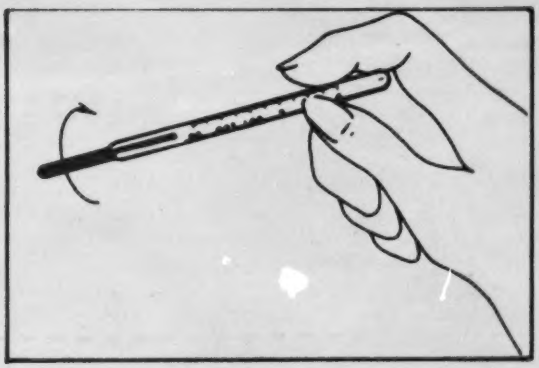
STEP 5 – Shake down the thermometer to 95^{O} or below.

STEP 8 – After 3 minutes, remove the thermometer from the student's mouth.

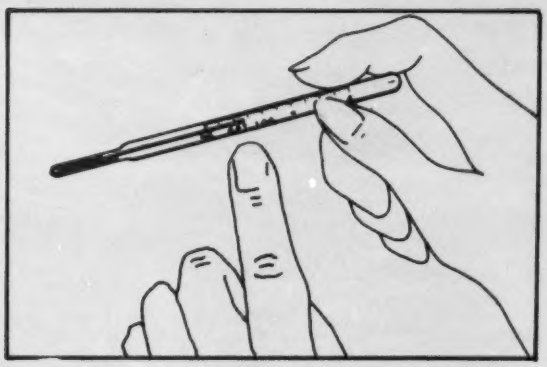
STEP 6 – Holding the thermometer by the stem end, place the bulb end under the student's tongue near the center where tongue is attached to the floor of the mouth.



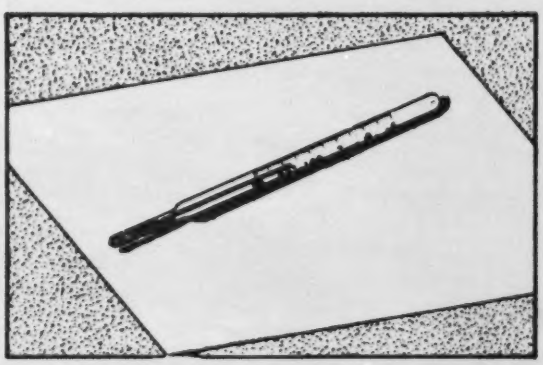
STEP 9 – Holding the stem end, take a dry cotton ball and rotate the thermometer while moving the cotton ball from stem to bulb to remove any material (from mouth or lips) that was on the thermometer.



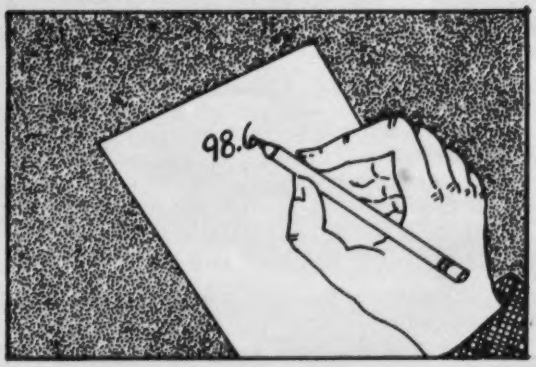
STEP 10 – Rotate the thermometer until the lines are at the top and the numbers are on the bottom.



STEP 11 – Follow the mercury from the bulb up the stem and note at which line it stops. Now figure out the temperature.



STEP 12 – Lay the thermometer on a clean paper towel until your instructor can check your reading.



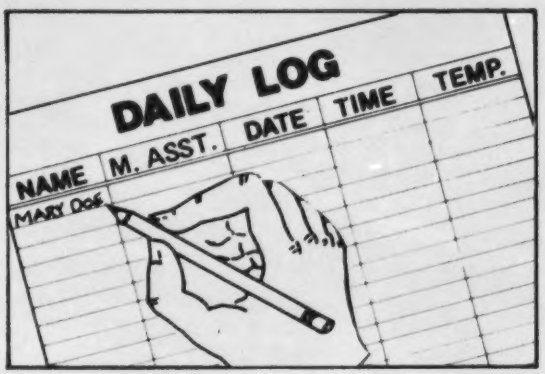
STEP 13 – On a piece of paper, write the temperature you read on the thermometer.

Check Point

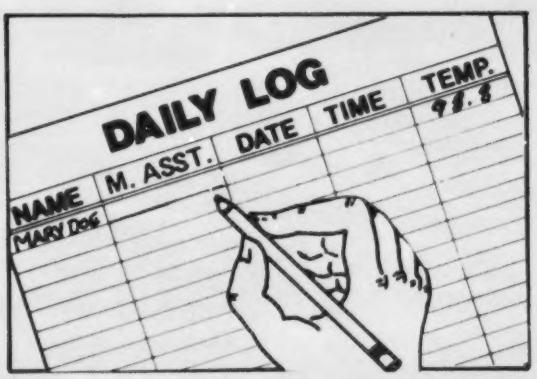
If your instructor says that your reading is correct, go on to Objective VIII. If your reading is incorrect, repeat Objectives IV, V, VI, and VII.

Instructional Objective VIII

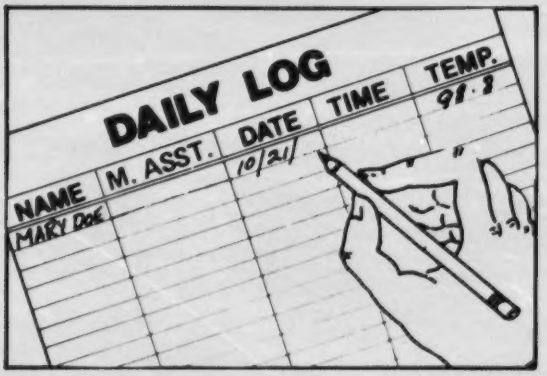
Obtain a copy of the Daily Log Sheet from your instructor. Record the information required in the proper columns.



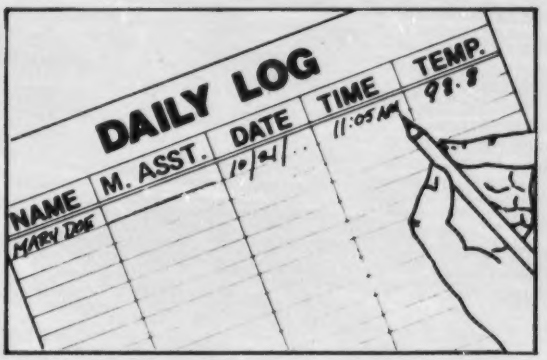
STEP 1 – Under the column labeled name, record the student's name whose temperature you took.



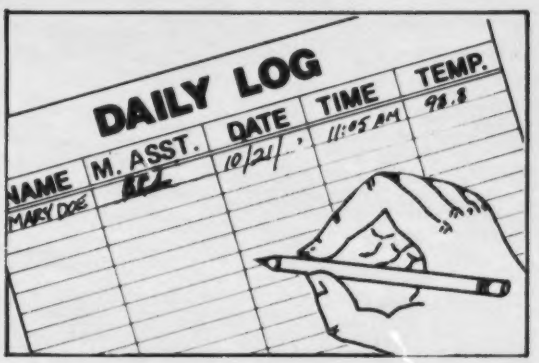
STEP 2 – Under the column labeled temperature, record the student's temperature.



STEP 3 – Under the column labeled date, record today's date.



STEP 4 – Under the column labeled time, record the time the temperature was taken.



STEP 5 – Under the column labeled medical assistant, record your initials (all 3).

Check Point

Recheck the information you recorded on your Daily Log Sheet. If your partner has not taken your temperature, he/she should now do Objectives V through VIII.

HEALTH OCCUPATIONS

Kit No. 301 B – PULSE AND RESPIRATION

STUDENT LEARNING ACTIVITY GUIDE

HEALTH OCCUPATIONS
PULSE AND RESPIRATION

INTRODUCTION

Pulse and respiration are very important vital signs which are usually taken and recorded by the health assistant. These vital signs are checked at the same time as temperature, blood pressure, height, and weight.

Pulse is the pressure of the blood felt against the wall of an artery as the heart alternately beats and rests. It is easily felt in arteries close to the skin and can be squeezed against a bone by the finger.

The main function of respiration is to supply the cells in the body with oxygen and to rid the body of excess carbon dioxide. When respirations are inefficient, carbon dioxide accumulates in the blood stream making the skin dusky or bluish.

GOALS

Each student will define and observe pulse and respiration.

Each student will locate 6 pulse areas.

Each student will accurately count and record pulse for one minute.

Each student will accurately count and record respiration for one minute.

DIRECTIONS

Each student will be both a patient and a medical assistant. Each student will take and record the pulse and respiration of another student.

Follow directions and complete each check point. Objectives I and II will be done individually. Work in pairs on Objectives III and IV.

Have your Daily Log Sheet obtained in Kit 301 A ready for use in this activity.

MATERIALS

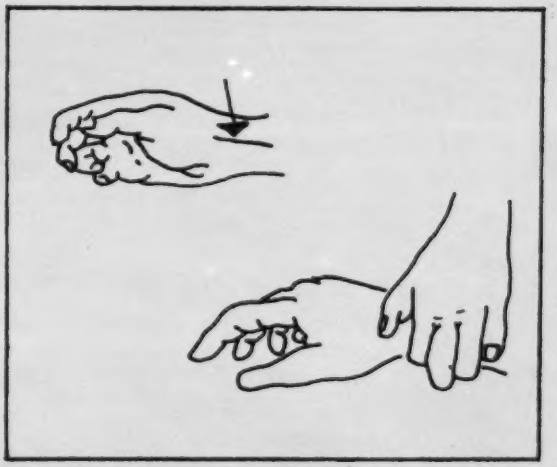
Stopwatch

PROGRAMMED TEXT

Instructional Objective I

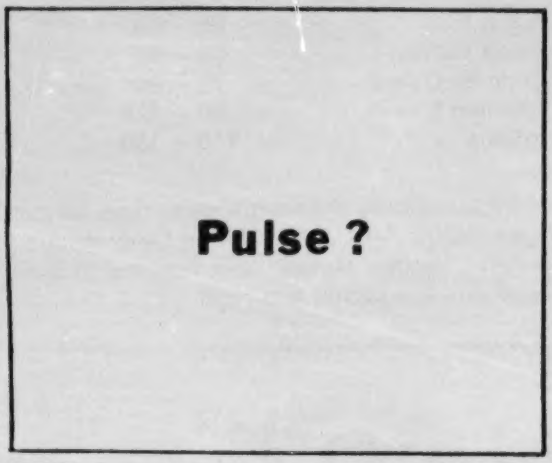
The student will define and observe pulse and respiration.

STEP 1 – Pulse is the pressure of the blood felt against the wall of an artery as the heart alternately beats and rests.



STEP 2 – Locate your pulse on the radial artery on your wrist. Exert a little pressure and count the pulse beats.

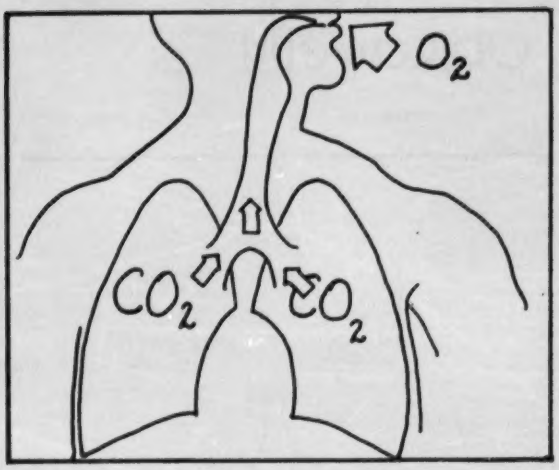
84 47



STEP 3 – Now you can understand the definition of pulse. Go back to Step 1 and study the definition until you are sure you could tell it to someone else.

STEP 4 – Did you feel the pressure of the blood against the wall of the radial artery?

STEP 5 – Respiration is usually taken at the same time the medical assistant counts pulse.



STEP 6 – Respiration takes place to supply the cells in the body with oxygen and to rid the body of excess carbon dioxide.

STEP 7 – Start counting the times the chest rises (inhalation) and falls (exhalation) and you will be counting respiration.

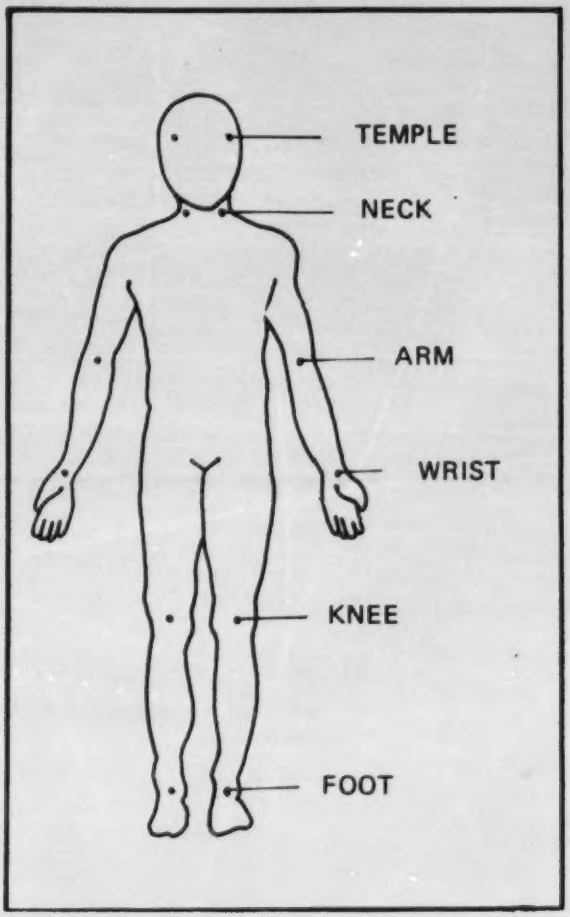
Check Point

Obtain a copy of Check Point No. I from your instructor. Without looking at your guide, complete the statements. Check your answers with your instructor.

If your answers are wrong, go back to Objective I, study the steps and repeat the check point. If your answers are correct, continue with Objective II.

Instructional Objective II

The student will locate the 6 pulse areas.



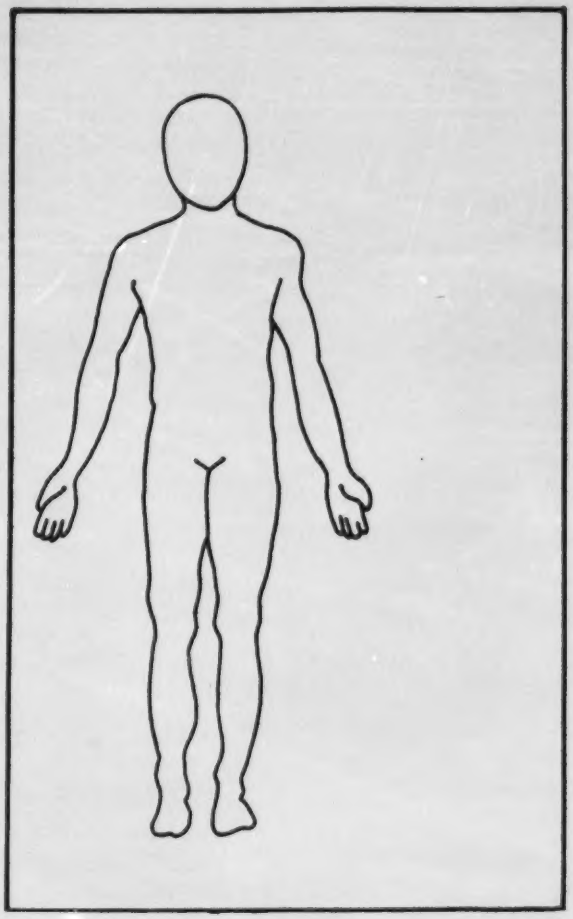
STEP 1 – Study the 6 pulse points marked above. Notice that you may take pulse in the temple, the side of the neck, the bend of an arm, the wrist, behind the knee, and on the top of the foot.

Age	Body Temperature
Size	Food
Condition of Patient	Exercise

STEP 2 – Notice the above list of things that influence the pulse rate (speed), rhythm (regularity), and volume (fullness). Rate, rhythm, and volume should be noted when taking pulse.

	Beats Per Minute
Adult Men	65 – 70
Adult Women	65 – 80
Children Over 7	72 – 90
Children 1 to 7	80 – 120
Infants	110 – 130

STEP 3 – Study the normal pulse rates taken from *Health Assistant* by Esther Caldwell and Barbara Hegner. Notice what happens to the pulse rate as a person gets older.



STEP 4 – Can you locate the pulse areas?

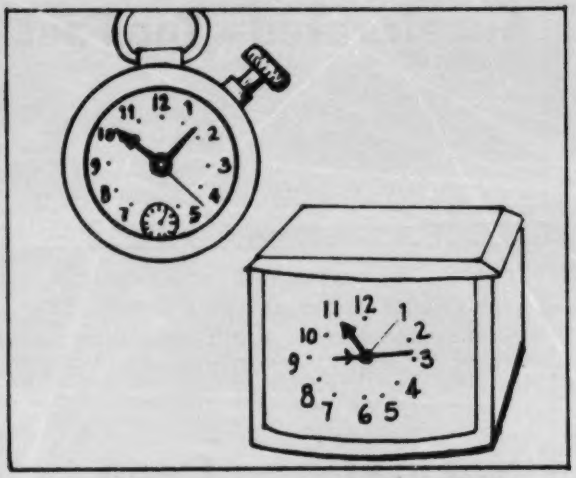
Check Point

Obtain a copy of Check Point No. II from your instructor. Without looking at your guide, place a dot at all the 6 pulse areas. Identify the pulse areas on both sides (12 dots). Check your work with your instructor.

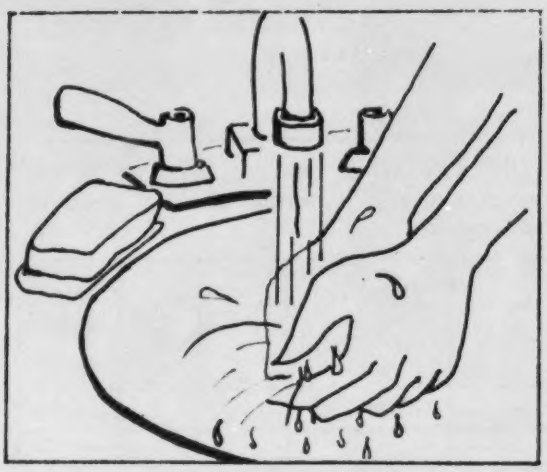
If your answers are wrong, go back to Objective II, study the steps and repeat the check point. If your answers are correct, continue with Objective III.

Instructional Objective III

Each student will accurately count and record pulse and respiration.



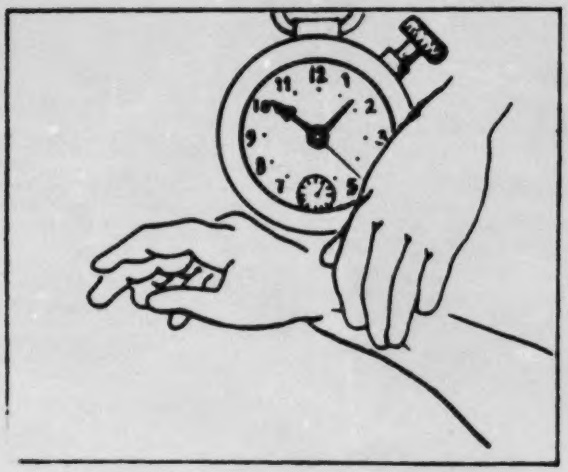
STEP 1 – Get a stopwatch, a clock with second hand, from your instructor.



STEP 2 – Wash hands and tell the patient what you plan to do.

STEP 3 – The patient should be in a comfortable position. The palm of his hand should be down.

STEP 4 – Locate the pulse on the radial artery on the thumb side of the wrist with the tips of your first 3 fingers. You may need to exert a little pressure. Do not use your thumb since it contains a pulse. Be sure to check the rhythm (regularity) and volume (fullness) when taking pulse.



TEP 5 – When pulse is felt, exert slight essure. Using a stopwatch, count the pulse 1 minute. Remember the number you ounted so you can record it in the log book ater.

STEP 6 – Leave your fingers on the radial pulse and start counting the number of times the chest rises (inhalation) and falls (exhalation) during 1 minute. The patient should not be aware that you are counting respiration so he will breathe normally.

Accelerated = Too Fast

STEP 7 – The normal rate for adults is 14 – 18 per minute. If the rate is more than 25 per minute, it is said to be "accelerated".

Normal **Deep**

Shallow **Labored**

STEP 8 – What was the character of the respiration. Was it normal, shallow, deep, or labored?

Pulse	Respira-tion	Date	Time	Med. Asst.

STEP 9 – Record the pulse and respiration information on your Daily Log Sheet obtained in Kit 301 A.

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Check Point

Using your Daily Log Sheet obtained in Kit 301 A, record the student's name, pulse rate, date and time you took the pulse.

Record the respiration, date and time.

Write all your initials in the column labeled medical assistant.

HEALTH OCCUPATIONS

Kit No. 301 C – BLOOD PRESSURE

STUDENT LEARNING ACTIVITY GUIDE

HEALTH OCCUPATIONS
BLOOD PRESSURE

INTRODUCTION

What is blood pressure? Blood pressure is the force exerted by the heart to pump the blood throughout the body. The blood pressure will vary based on the size of the person, the amount of rest or sleep, the state of emotions, etc. Blood pressure can indicate an illness before other symptoms appear.

The normal range for an adult person is $\frac{90 \cdot 140}{60 \cdot 90}$. The upper number reading, called systole (sis-to-le), is when the heart forces the blood onward to circulate through the body. Diastole (di-as-to-le), the lower number, is when the heart is resting.

GOALS

Each student will know the names of the different parts of a blood pressure cuff.

Each student will know the names of the different parts of a stethoscope.

Each student will learn how to use a blood pressure cuff.

Each student will learn how to take and record another student's blood pressure.

Each student will learn how to clean a stethoscope after use.

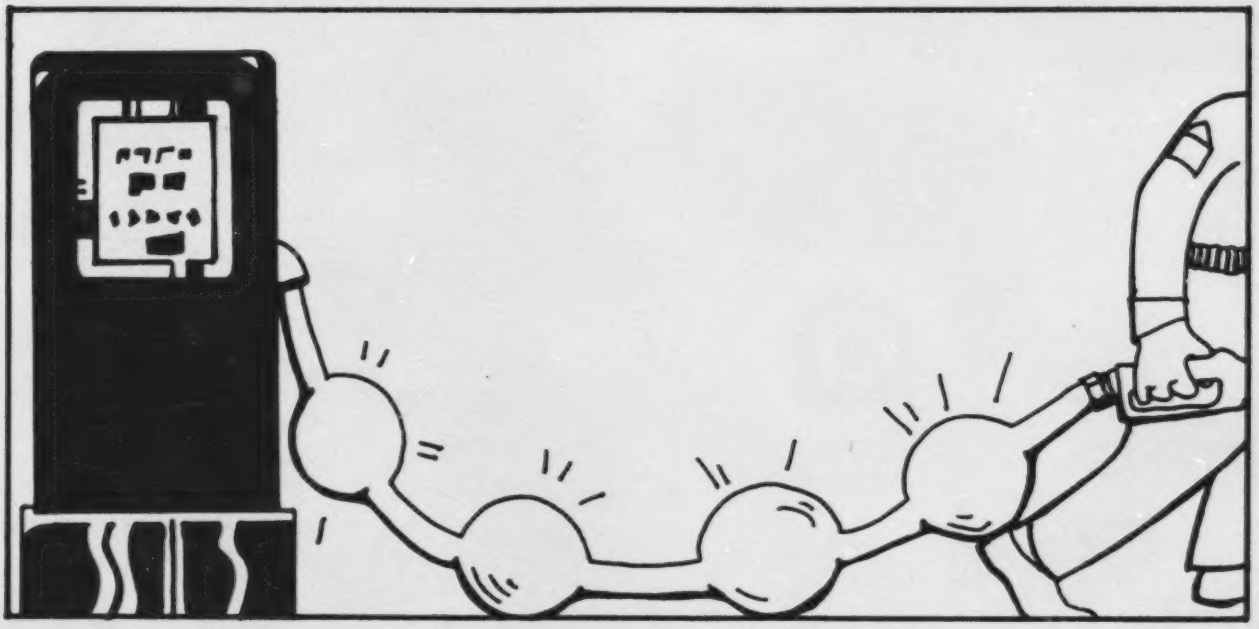
DIRECTIONS

Follow directions and complete each check point. Work in pairs on Objectives I through IV. Objectives V through VIII are to be done by one person with the other acting as the patient.

Have your Daily Log Sheet obtained in Kit 301 A ready for use in the activity.

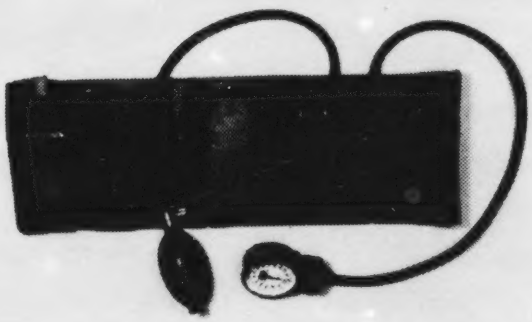
MATERIALS

1 sphygmomanometer (blood pressure cuff)
1 stethoscope
1 cup containing cotton balls and 70% alcohol
2 Student Activity Guides

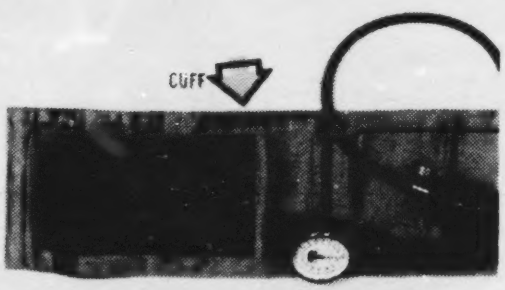


Instructional Objective 1

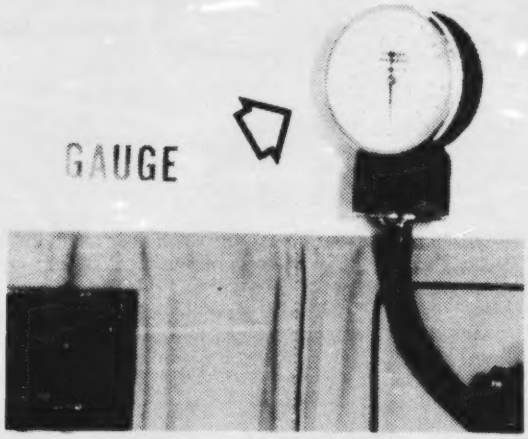
Each student will identify the parts of a sphygmomanometer (blood pressure cuff).



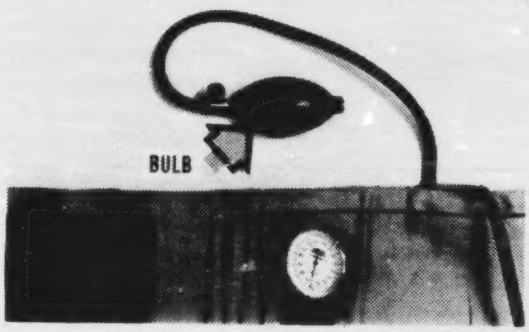
STEP 1 – Lay the blood pressure cuff in front of you as shown in the picture. Look at the parts as identified in the following steps.



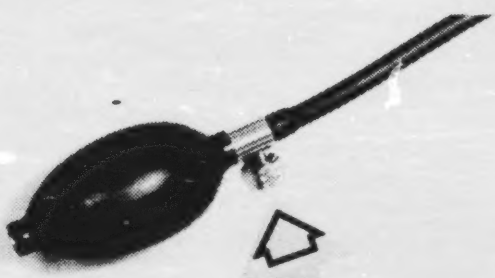
STEP 2 – This part is called the cuff and is wrapped around a person's arm.



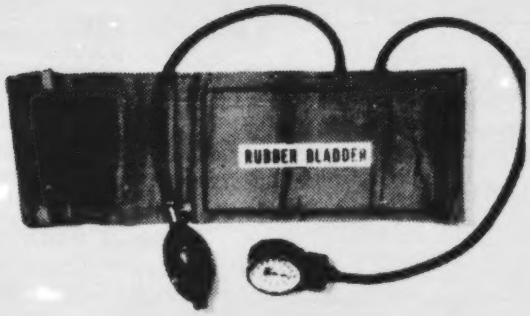
STEP 3 – This is the gauge that measures the person's blood pressure.



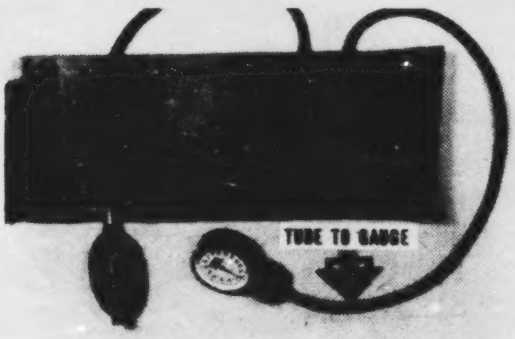
STEP 4 – This is the bulb that is used to pump air into the bladder.



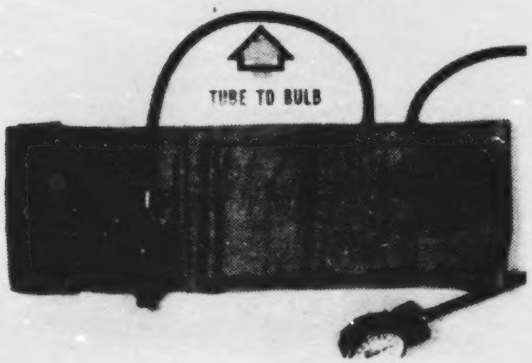
STEP 5 – This is the thumbscrew which allows the air to be released from the bladder.



STEP 6 – This is the area of the rubber bladder which is used to hold the air.



STEP 7 – This is the tube which goes to the gauge.



STEP 8 – This is the tube which goes to the bulb.

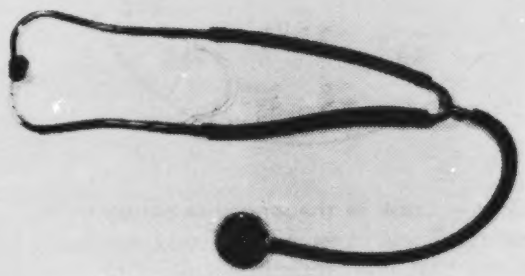
Check Point

Obtain a copy of Check Point No. I from your instructor. Without looking at your guide, identify the parts of a sphygmomanometer (blood pressure cuff). Check your answers with your instructor.

If your answers are wrong, go back to Objective I, study the steps and repeat the check point. If your answers are correct, continue with Objective II.

Instructional Objective II

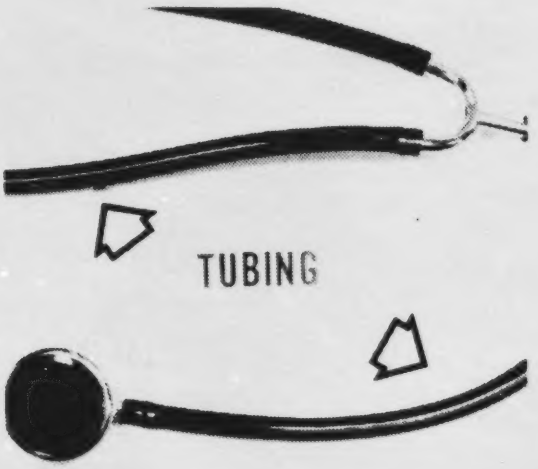
Each student will identify the parts of a stethoscope.



STEP 1 – Lay the stethoscope in front of you as shown in the picture. Look at the parts of it while doing the following steps.

EAR PIECES

STEP 2 – These are the earpieces. They are placed in the ear to listen to the pulse.



TUBING

STEP 3 – This is the tubing through which the sound travels.

HEAD OF STETHOSCOPE

STEP 4 – This is the head of the stethoscope. It is placed on the person's arm to pick up the sound of the pulse.

Check Point

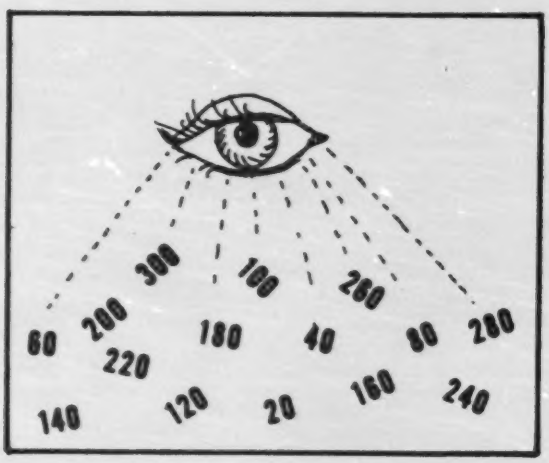
Obtain a copy of Check Point No. II from your instructor. Without looking at your guide, identify the parts of the stethoscope. Check your answers with your instructor.

If your answers are wrong, go back to Objective II, study the steps and repeat the check poing. If your answers are correct, continue with Objective III.

Instructional Objective III

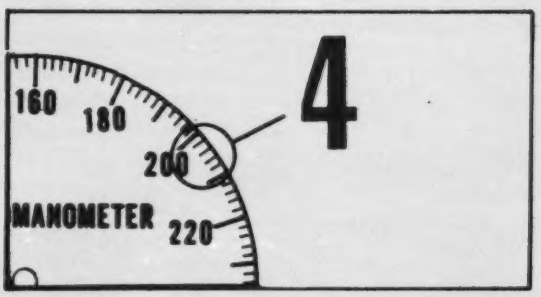
Each student will identify the markings on a blood pressure cuff gauge.

STEP 1 – This is what the face of the gauge on the blood pressure cuff looks like.

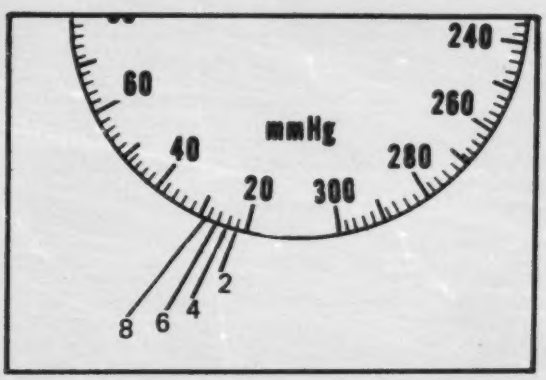


STEP 2 – Look at the numbers that are on the gauge. These are all *even* numbers.

STEP 3 – Look at the *long* lines between the numbers. These lines are the odd numbers. The one that your indicator is pointing to is 70.



STEP 4 – Between all the long lines are short lines. There are always four of the short lines between the long lines. Count some of these.



STEP 5 – Going clockwise, these short lines are numbered 2, 4, 6, and 8. When reading the gauge, you add the number of the short line to the number of the long line before it. Let's practice reading the gauge.

STEP 6 – What number is the indicator pointing to on this gauge?

86

STEP 7 – The answer is 86. The indicator is pointing to the third short line which is 6. This line is after 0 which makes it 86. Let's try another one.

STEP 8 – What number is the indicator pointing to on this gauge?

152

STEP 9 – The answer is 152. The indicator is pointing to the first short line which is 2. This line is after the unnumbered long line, 150, which makes it 152.

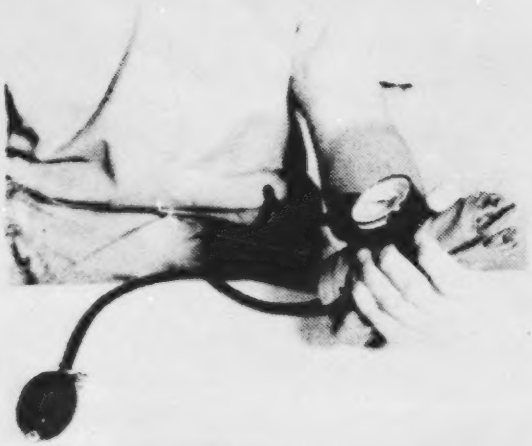
Check Point

Obtain a copy of Check Point No. III from your instructor. Without using your guide, write the number each indicator is pointing to under the gauge. Check your answers with the instructor.

If your answers are wrong, go back to Objective III, study the steps and repeat the check point. If your answers are correct, continue with Objective IV.

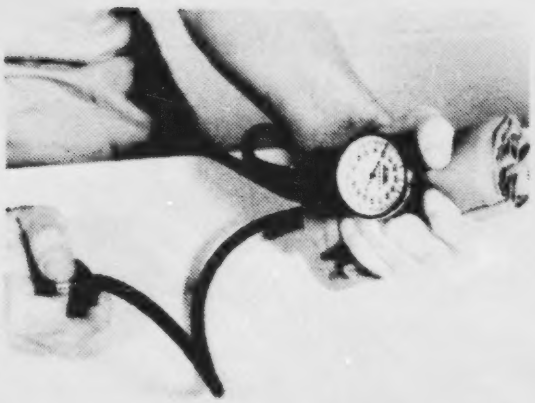
Instructional Objective IV

Each student will inflate a blood pressure cuff to approximately 140-160 and slowly let the air out until the needle indicates 0.

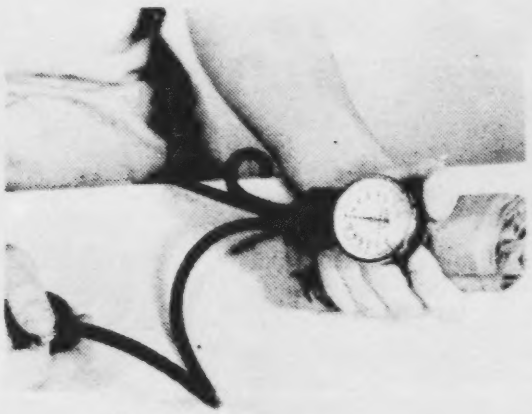


STEP 1 – Roll the blood pressure cuff tightly and hold with one hand.

STEP 2 – With your other hand, hold the rubber bulb. Use your thumb and index finger to tighten the thumbscrew just tight enough so air doesn't escape. Make sure you can loosen the thumbscrew with just your thumb and index finger.



STEP 3 – While holding the tightly rolled cuff in your other hand, tighten the thumbscrew by turning clockwise and squeezing the bulb several times until the needle reaches approximately 140-160.



STEP 4 – With your hand holding the bulb, use your thumb and index fingers to loosen the thumbscrew slightly by turning counterclockwise. Watch the needle fall slowly down to 0.

REPEAT
REPEAT
REPEAT

STEP 5 – Continue repeating the above four steps until you can control the valve so that the needle falls *slowly* and *evenly* to 0.

STEP 6 – Let your partner practice this procedure if he/she has not yet done so.

Check Point

Did you have the cuff rolled up tightly?

Did you hold the bulb as shown in the illustration?

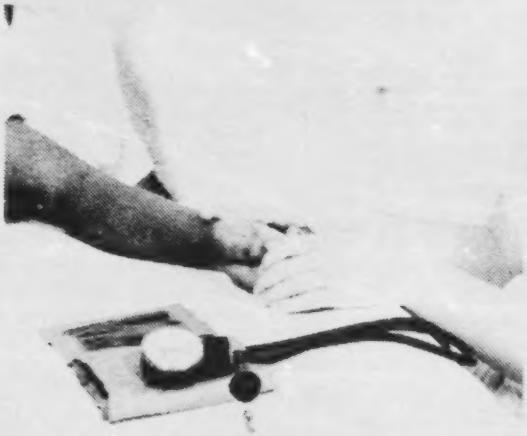
Were you able to turn the thumbscrew?

Were you able to control the thumbscrew so that the air was released slowly?

Instructional Objective V

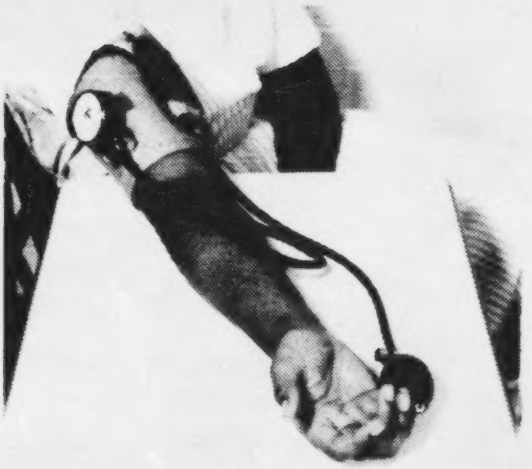
The student will place a blood pressure cuff on the arm of another student.

STEP 1 – Have your partner sit down and place the nearest arm on the desk top facing you.



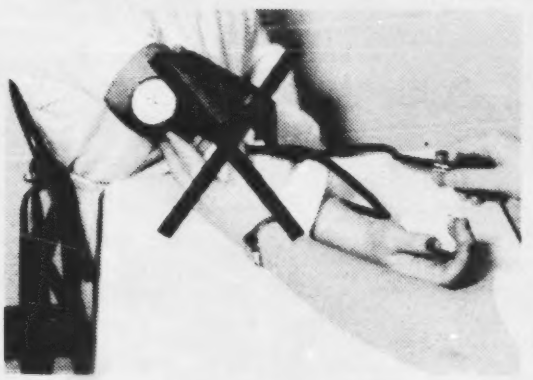
STEP 2 – The palm of the hand of the student getting a blood pressure taken should be facing up.

STEP 3 – Place the blood pressure cuff on the arm about 1" (2.54 cm) to 1½" (3.81 cm) above the bend in the elbow. Make sure the gauge is facing you.

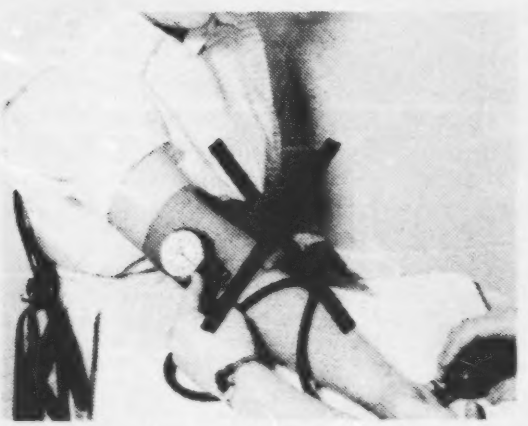


STEP 5 – The tubes on the blood pressure cuff should be on the lower edge of the cuff near the elbow.

STEP 4 – Wrap the long end of the cuff snugly around the arm and press the velcro together. This will hold the cuff firmly around the arm.



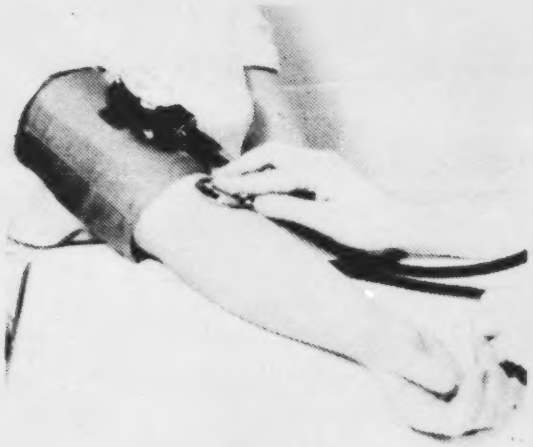
STEP 6 – Never place the blood pressure cuff over clothing.



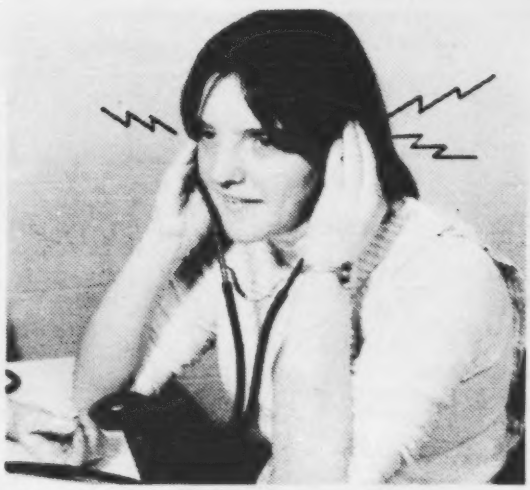
STEP 7 – Make sure the cuff is tight enough so that it doesn't slip.

STEP 8 – With your first two fingers, feel for the pulse (heartbeat) on the middle to inner side of the elbow. Use a small amount of pressure. You should feel a slight thumping.

STEP 9 – Place the earpieces of the stethoscope in your ears.



STEP 10 – Carefully place the head of the stethoscope, smooth side down, over the area where you felt the pulse (heartbeat).



STEP 11 – If you could not feel the pulse in Step 8 after trying several times, place the head of the stethoscope over the elbow from the middle to inner side. The stethoscope magnifies sound, so do not let the head hit any surface or it will hurt the ears.

Check Point

Did you place the blood pressure cuff correctly on your partner's arm?

Were you able to find your partner's pulse?

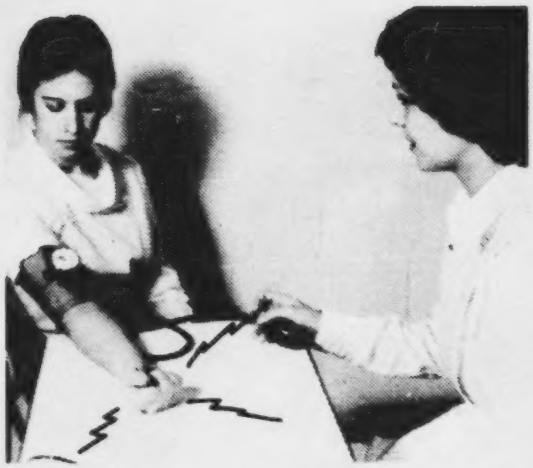
Were you able to hear your partner's pulse though the stethoscope?

Instructional Objective VI

Each student will take another student's blood pressure.

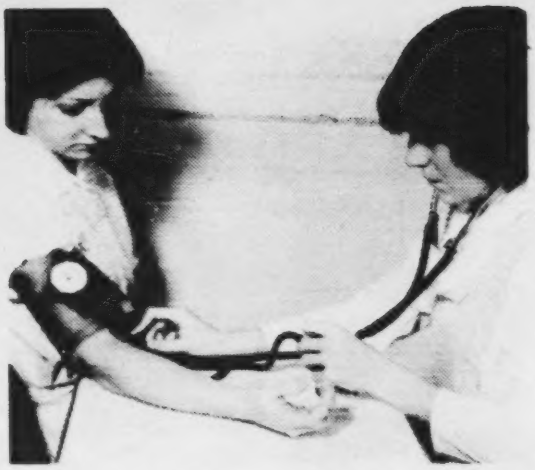
STEP 1 – Never take a person's blood pressure over 3 times on the same arm at one sitting; this could cause bruising.

STEP 2 – Do not stop the needle as it comes down at any place.

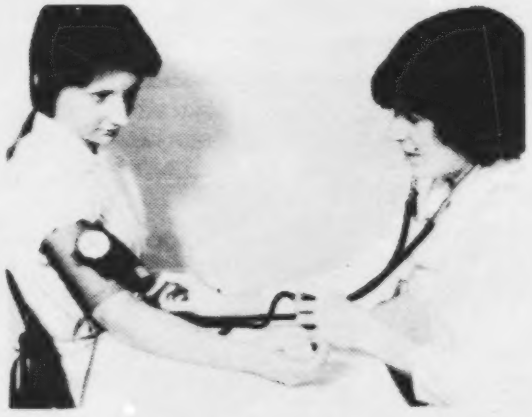


STEP 3 – Tell the person whose blood pressure you are taking that when the cuff is tight on the arm, it may cause a tingling in the hand. He/she should continue to hold still.

STEP 4 – Turn the thumbscrew clockwise to tighten. Squeeze the bulb several times until the indicator reaches about 10 on the gauge.

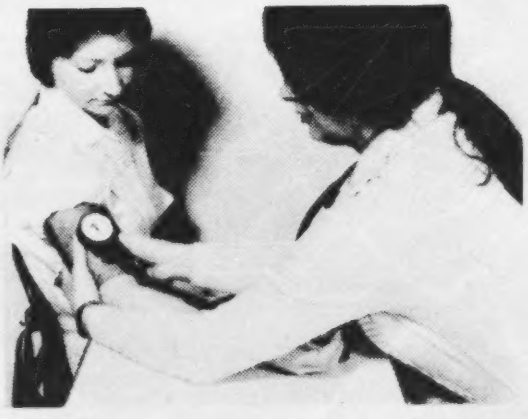


STEP 5 – Turn the thumbscrew slightly counterclockwise to loosen so that the indicator falls slowly and evenly. Listen with the stethoscope until you hear the first regular thumping noise. Remember the number on the gauge.

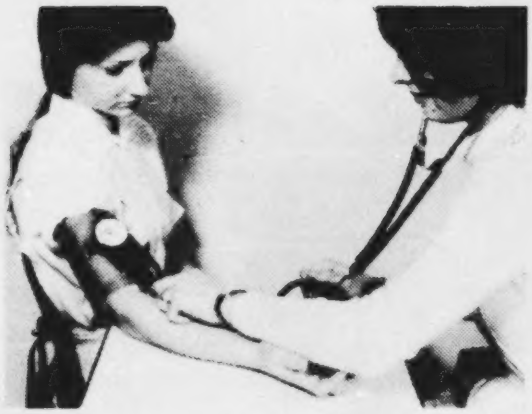


STEP 6 – Keep listening to the thumping until you cannot hear it anymore. Remember the number at which it stopped.

STEP 7 – Write down the first number taken when you started hearing the sounds ($\frac{120}{}$). Then write down the number taken when you stopped hearing the sound $\frac{120}{80}$. This is the person's blood pressure. Blood pressure may vary on the same person each time you take it and also when it is taken on the other arm of the same person.



STEP 8 – If you did not hear the thumping, or if you let the air out too fast, push any remaining air out of the cuff with your hands. While the cuff is still on the arm, repeat Step 4. This may be done 2 times; the cuff must then be removed to the other arm or another person.



STEP 9 – If you are having trouble hearing the thumping, you may be opening the thumbscrew too much and letting the needle drop too fast. You may also be expecting to hear a loud sound; the sound may be very faint.

STEP 10 – Remember, blood pressure varies for many reasons. The excitement of getting a blood pressure check can raise the reading. Lack of sleep over a long period of time can lower the blood pressure. Anyone's blood pressure reading over $\frac{140}{90}$ should be rechecked by health personnel.

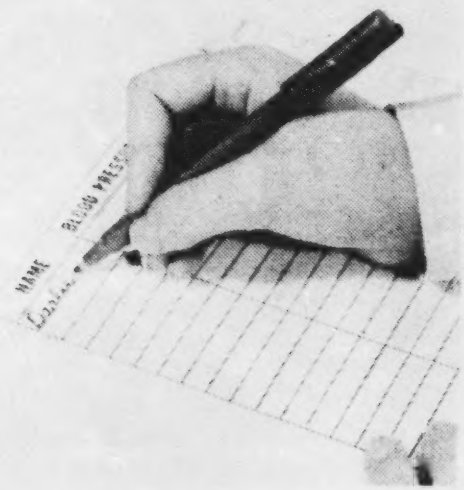
Check Point

Ask your instructor to check your reading. Both of you can listen for the thumping using the double stethoscope. If you both obtain a reading within 2 to 4 points of each other, you have successfully learned to take a person's blood pressure.

Instructional Objective VII

Each student will record another student's blood pressure.

STEP 1 – Use your Daily Log Sheet obtained from your instructor in Kit 301 A.



STEP 2 – Under name, write the name of the person whose blood pressure you have just taken.

STEP 3 – Under blood pressure, write the reading you took. For example, systolic (120 first sound) and diastolic (when sound stops 80)

STEP 4 – Under date, write today's date.

STEP 5 – Under time, write the time that you took the student's blood pressure.

Blood Pressure	Date	Time	Med. Asst.
120/80	1-2-82	1:40 PM	G.W.J.

STEP 6 – Under medical assistant, write your initials. (all 3)

Check Point

Check the information you have recorded on the Daily Log Sheet, especially the blood pressure reading, to make sure it is accurate.

Instructional Objective VIII

Each student will clean the earpieces of the stethoscope with a piece of cotton soaked in 70% alcohol.

STEP 1 – If you haven't done so already, remove the stethoscope from your ears.

STEP 2 – Take a ball of cotton from the cup that contains 70% alcohol.

STEP 3 – With a small amount of friction and a rotating movement, clean the earpieces. When you are through, throw the cotton in the trash can.

STEP 4 – If your partner hasn't taken your blood pressure, it is now his/her turn.

Check Point

Did you make sure that the earpieces were clean?

HEALTH OCCUPATIONS

Kit No. 301 D – HEIGHT AND WEIGHT

STUDENT LEARNING ACTIVITY GUIDE

INTRODUCTION

Height and weight are two vital measurements determined during a physical examination. These measurements are usually performed and recorded by the health assistant to aid the physician in determing a patient's general condition. The height and weight are usually measured at the same time as temperature, pulse, respiration, and blood pressure.

In this module you will learn how to accurately measure and record height and weight.

GOALS

Each student will identify the parts of a physician's scale.

Each student will accurately convert inches to feet.

Each student will accurately weigh a patient (another student) and record it on the Daily Log Sheet.

Each student will accurately measure the height of another student and record it on the Daily Log Sheet.

DIRECTIONS

Follow directions and complete each check point. Work individually on Objectives I and II. Objectives III and IV must be done with a partner.

Have your Daily Log Sheet obtained in Kit 301 A ready for use in this activity.

MATERIALS

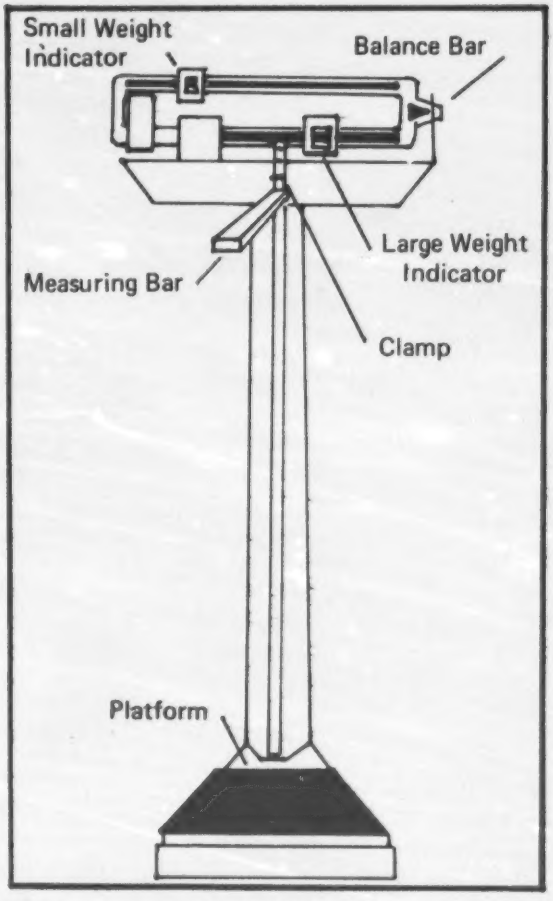
Physician scale
Pencil or pen

PROGRAMMED TEXT

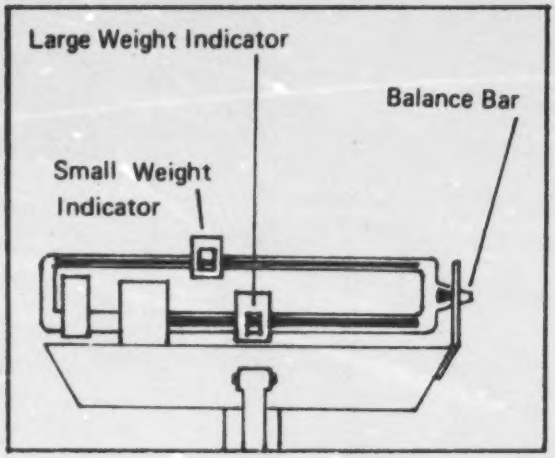
Instructional Objective I

Instructional Objective I

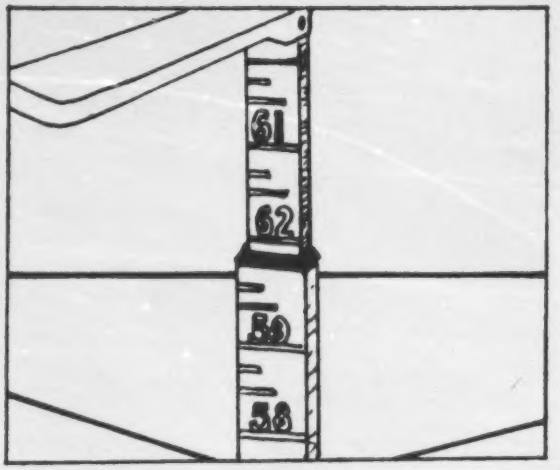
Each student will identify the parts of a physician's scale.



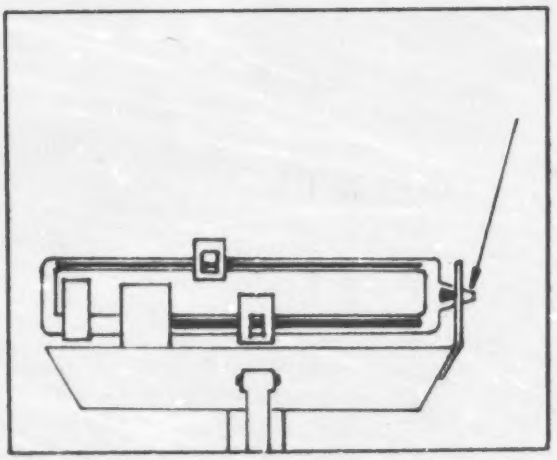
STEP 1 – A physician's scale is used to accurately weigh and measure the height of a patient. Study the parts of the scale.



STEP 2 – The physician's scale has two bars, an upper one and a lower one. Each bar has a sliding weight on it. The top bar is marked at every pound (lb.). The bottom bar is marked at every 50 lbs. The even numbered pounds are marked with numbers. The long line between even numbers indicates the odd number pounds. Each small line indicates one quarter (1/4) of a pound.



STEP 4 – The patient's height is read at the movable point of the ruler.



STEP 3 – Notice that there is a pointer (balance bar) sticking out of the square opening on the right side of the scale.

Instructional Objective II

A health assistant must quickly convert inches to feet and inches when recording a patient's height. Each student will check his accuracy in recording height.

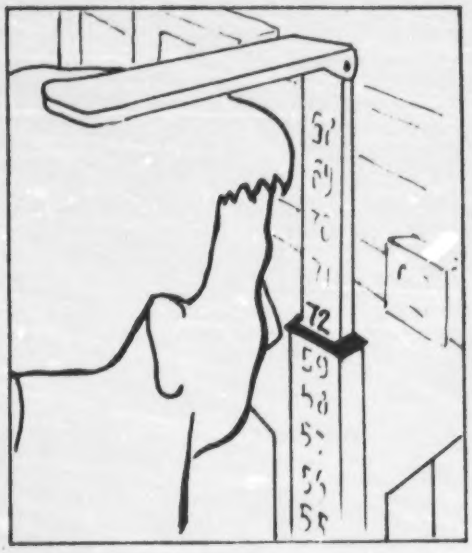
STEP 1 – After measuring the height of a patient, convert inches (") to feet (') before recording it.

$$\begin{array}{r} 4'\ 7'' \\ 12\overline{)\ 55} \\ \underline{48} \\ 7'' \end{array}$$

STEP 2 – To convert inches to feet, divide the number of inches by 12. If a patient measures 55", divide 55 by 12. The patient's height is 4'7".

$$\begin{array}{r} 5'\ 11\tfrac{1}{4}'' \\ 12\overline{)\ 71\tfrac{1}{4}} \\ \underline{60} \\ 11\tfrac{1}{4} \end{array}$$

STEP 3 – If a patient measures 71¼", divide the number by 12. The patient's height would be recorded as 5' 11¼". Study the math example.



STEP 4 – What would be a patient's height if the measuring rod was on 72"?

$$\begin{array}{r} 6'' \\ 12\overline{)\ 72} \\ \underline{72} \end{array}$$

STEP 5 – Your answer should have been 6'.

Check Point

Obtain a copy of Check Point No. II from your instructor. Without looking at your guide, correct the heights to feet and inches. Check your answers with your instructor.

If you miss more than 2 answers, go back to Objective II, study the steps and repeat the check point. If you miss 2 answers or less, continue with Objective III.

Instructional Objective III

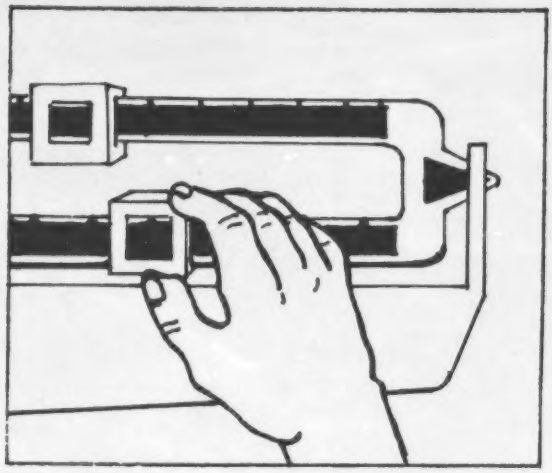
Each student will weigh and measure the height of another student. Record the weight and height on the Daily Log Sheet in the correct columns.

STEP 1 – Escort the patient to the scales.

STEP 2 – Place a paper towel on the platform of the scale.

STEP 3 – Move the weights to the extreme left and let the balance bar hang free.

STEP 4 – Assist the patient in removing his/her shoes and stepping up on the scale platform. The balance bar will rise to the top of the bar guide.



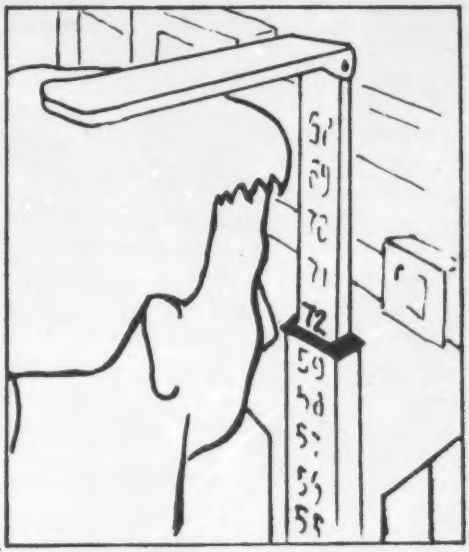
STEP 5 – Move the large weight to the closest estimated patient weight.

STEP 6 – Move the small weight to the right until the balance bar hangs free half way between the upper and lower bar guide.

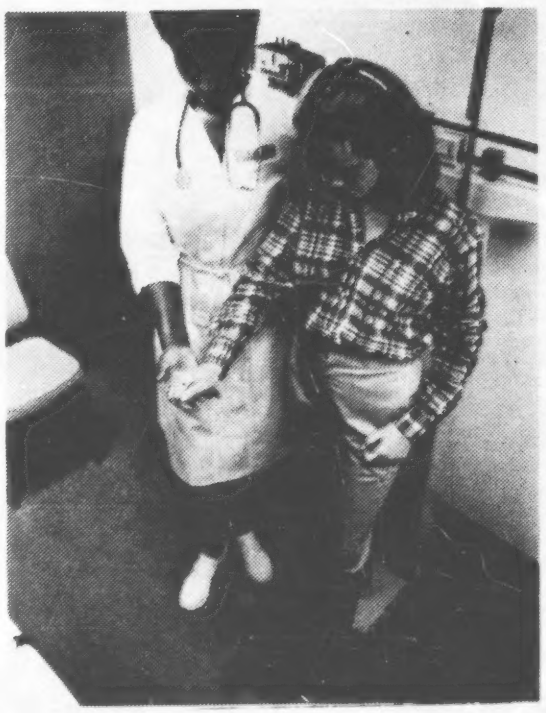
150 large weight lbs.
__8 small weight lbs.
158 lbs. = patient's wt.

STEP 7 – Add the 2 figures and remember the total so you can record it on the Daily Log Sheet.

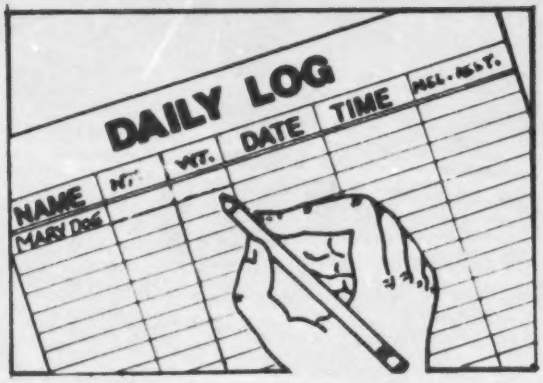
STEP 8 – While the student is still standing on the platform, raise the height bar until it rests levelly on the patient's head.



STEP 9 – Remember – the reading is made on the movable part of the ruler. Note the number of inches indicated.



STEP 10 – Assist the patient in stepping off the scale and putting on his/her shoes.



STEP 11 – Record the weight and height of the patient, date and time, and your 3 initials as medical assistant in the appropriate columns on the Daily Log Sheet.

Check Point

Check the information you have recorded on the Daily Log Sheet to make sure it is accurate.

The student posing as the patient should now be the medical assistant. Start at Objectives III and repeat Steps 1 through 12.

355.374-010 AMBULANCE ATTENDANT (medical ser.)

Accompanies and assists AMBULANCE DRIVER (medical ser.) on calls: Assists in lifting patient onto wheeled cart or stretcher and into and out of ambulance. Renders first aid, such as bandaging, splinting, and administering oxygen. May be required to have Red Cross first-aid training certificate.

355.674-014 NURSE AIDE (medical ser.) hospital attendant; nursing assistant.

Assists in care of hospital patients, under direction of nursing and medical staff: Answers signal lights and bells to determine patients' needs. Bathes, dresses, and undresses patients. Serves and collects food trays and feeds patients requiring help. Transports patients to treatment units, using wheelchair or wheeled carriage, or assists them to walk. Drapes patients for examinations and treatments, and remains with patients, performing such duties as holding instruments and adjusting lights. Dusts and cleans patients' rooms. Changes bed linens, runs errands, directs visitors, and answers telephone. Takes and records temperature, pulse and respiration rates, and food and liquid intake and output, as directed. May apply compresses and hot water bottles. May clean, sterilize, store, prepare, and issue dressing packs, treatment trays, and other supplies and be designated as NURSE AIDE, CENTRAL SUPPLY (medical ser.). May prepare patients for delivery and clean delivery rooms, and be designated as NURSE AIDE, DELIVERY (medical ser.). May bathe, weigh, dress, and feed newborn babies and be designated as NURSE AIDE, NURSERY (medical ser.). May clean, sterilize, and assemble into packs, supplies and instruments used in surgery, and maintain cleanliness and order of operating rooms and be designated as NURSE AIDE, SURGERY (medical ser.).

412.674-010 ANIMAL KEEPER (amuse. & rec.) animal caretaker; menagerie caretaker; zoo caretaker.

Feeds, waters, and cleans quarters of animals and birds in zoo, circus, or menagerie: Observes animals to detect illnesses and injuries. Treats minor injuries or ailments, and reports serious illnesses and injuries to ANIMAL KEEPER, HEAD (amuse. & rec.). Transfers animals or birds from one cage or pen to another. May prepare food. May bathe and groom animals. May answer questions of visitors concerning animals or birds. May be designated according to animal cared for as BEAR KEEPER (amuse. & rec.); BIRD KEEPER (amuse. & rec.); CAT KEEPER (amuse. & rec.); DEER KEEPER (amuse. & rec.); ELEPHANT KEEPER (amuse. & rec.); MAMMAL KEEPER (amuse. & rec.); MONKEY KEEPER (amuse. & rec.); REPTILE KEEPER (amuse. & rec.).

079.367-010 MEDICAL ASSISTANT (medical ser.)

Performs following duties under direction of PHYSICIAN (medical ser.) in examination and treatment of patients: Prepares treatment rooms for examination of patient. Drapes patients with covering and positions instruments and equipment. Hands instruments and materials to doctor as directed. Sterilizes and cleans instruments. Prepares inventory of supplies to determine items to be replenished. Interviews patients and checks pulse, temperature, blood pressure, weight, and height. May operate equipment, give injections or treatments, and assist in laboratory. May schedule appointments, receive money for bills, keep X-ray and other medical records, perform secretarial tasks, complete insurance forms, and maintain financial records.

079.374-014 NURSE, LICENSED PRACTICAL (medical ser.)

Cares for ill, injured, convalescent, and handicapped persons in hospitals, clinics, private homes, sanitariums, and similar institutions: Takes and records temperature, blood pressure, and pulse and respiration rate. Dresses wounds, gives enemas, douches, alcohol rubs, and massages. Applies compresses, ice bags, and hot water bottles.

Observes patients and reports adverse reactions to medical personnel in charge. Administers specified medication, and notes time and amount on patients' charts. Assembles and uses such equipment as catheters, tracheotomy tubes, and oxygen suppliers. Performs routine laboratory work, such as urinalysis. Sterilizes equipment and supplies, using germicides, sterilizer, or autoclave. Prepares food trays and feeds patients. Records food and fluid intake and output. Bathes, dresses, and assists patients in walking and turning. Cleans rooms, makes beds, and answers patients' calls. Washes and dresses bodies of deceased persons. Must pass state board examination and be licensed. May assist in delivery, care and feeding of infants.

NURSE PROFESSIONAL (medical ser.) **nurse; nurse, certified; nurse, licensed; nurse, registered.**

A term applied to persons meeting the educational, legal, and training requirements to practice as professional nurses, as required by a State board of nursing. Performs acts requiring substantial specialized judgment and skill in observation, care, and counsel of ill, injured, or infirm persons and in promotion of health and prevention of illness. Classifications are made according to type of nursing activity engaged in as DIRECTOR, NURSING SERVICE (medical ser.); NURSE, GENERAL DUTY (medical ser.); NURSE, PRIVATE DUTY (medical ser.).

354.374-010 NURSE, PRACTICAL (medical ser.)

Cares for patients and children in private homes, hospitals, sanatoriums, industrial plants, and similar institutions: Bathes and dresses bed patients, combs hair, and otherwise attends to their comfort and personal appearance. Cleans room, and changes bed linen. Takes and records temperature, pulse, and respiration rate. Gives medication as directed by PHYSICIAN (medical ser.) or NURSE, GENERAL DUTY (medical ser.), and makes notation of amount and time given. Gives enemas, douches, massages, and alcohol rubs. Applies hot and cold compresses and hot water bottles. Sterilizes equipment and supplies, using germicides, sterilizer, or autoclave. Prepares food trays, feeds patients, and records food and liquid intake and output. Cooks, washes, cleans, and does other housekeeping duties in private home. May give injections. May care for infants and small children in private home. For practical nurses meeting State licensing requirements see NURSE, LICENSED PRACTICAL (medical ser.).